Cour d'Appel

Montréal

En app██ █ ████ ███████ ██████ ██ ██ ████████ ████ par
l'hono██re,
distri██

Nos: ██

LE PROCUREUR GÉNÉRAL DU CANADA
APPELANT-Intimé

c.

RJR-MacDONALD INC.
INTIMÉE-Requérante

—et—

██

LE PROCUREUR GÉNÉRAL DU CANADA
APPELANT-Intimé

c.

IMPERIAL TOBACCO LTD
INTIMÉE-Requérante

—et—

LE PROCUREUR GÉNÉRAL DU QUÉBEC
MIS EN CAUSE-Mis en cause

DOSSIER CONJOINT
Volume XXXIX: pages 7398 à 7574
(Dépositions)

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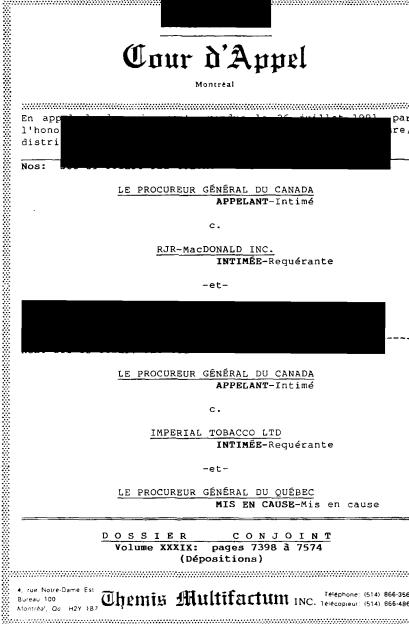Suite 100
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*   *

C A N A D A
PROVINCE DE QUÉBEC
DISTRICT DE MONTRÉAL

COUR SUPÉRIEURE

SOUS LA PRÉSIDENCE DE L'HONORABLE JUGE JEAN-JUDE CHABOT, J.C.S.

No: 500-05-009755-883

RJR-MACDONALD INC.
Requérante

c.

LE PROCUREUR GÉNÉRAL DU CANADA
Intimé

No: 500-05-009760-883

IMPERIAL TOBACCO LIMITÉE
Requérante

c.

LE PROCUREUR GÉNÉRAL DU CANADA
Intimé

13 mars 1990 – Vol. 45

COMPARUTIONS :

Pour la requérante
RJR-MACDONALD INC.

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Mᶜ GEORGES R. THIBAUDEAU,
EARL A. CHERNIAK, Q.C.,
Mᶜ MICHEL A. PINSONNAULT,
Avocats

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Pour la requérante
IMPERIAL TOBACCO LIMITÉE

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PAUL EVRAIRE, ESQ.,
Avocats

CÔTÉ & OUELLET
Procureurs

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LIST OF UNDERTAKINGS

In the year of Our Lord nineteen hundred and ninety (1990),

on this thirteenth (13th) day of the month of March,

PERSONALLY CAME AND APPEARED:

5   Me EARL A. CHERNIAK, Q.C.:

       For RJR-Macdonald, Earl Cherniak and Michel

       Pinsonneault.

Me SIMON V. POTTER:

       For Imperial, Simon Potter. My Lord, I wish to

10   apologize to the Court for being late this morning.

THE COURT:

       No problem. I was on the phone with my secretary when

       your secretary called, so that's...

Me POTTER:

15   So we both had an emergency. Thank you.

THE COURT:

       I didn't have a...

Me PAUL EVRAIRE:

       On time as always, are the solicitors for the Attorney

20   General of Canada, maîtres Baker, Williams, Joyal and

       Evraire.

Me CHERNIAK:

       Ah yes, Mr. ...

THE CLERK:

25   Just a moment, please. We must replace RJR-154.

Me CHERNIAK:

    Yes, I'm going to do that next.

In the year of Our Lord nineteen hundred and ninety (1990),

on this thirteenth (13th) day of the month of March,

PERSONALLY CAME AND APPEARED:

5   DONALD T. WIGLE, forty-seven (47) years of age, residing at

   [DELETED]

WHO, having made a solemn declaration, doth depose and say as

10 follows:

Me CHERNIAK:

     My Lord, I want to replace the exhibit yesterday that

     was filed with a missing page. I now have another

15   article that has all the pages.

THE COURT:

     Which one was that?

THE CLERK:

     154. RJR-154. J'ai l'ancien ici.

20 THE COURT:

     Ah. Toujours aussi efficace, comme d'habitude.

CROSS-EXAMINATION BY Me EARL A. CHERNIAK (CONT),

On behalf of Petitioner, RJR-Macdonald Inc.:

25 Q-   Dr. Wigle, have you got a copy of RJR-160 in front of

you. That was the nineteen -- January, nineteen
eighty-six (1986) estimate of mortality done by
Collishaw, Tostowaryk and you, which was the first time
you became involved in this process. Now, could you

5   just turn to page eight (8), and if we look at the
bottom of page eight (8) we see that the paper seems to
be dealing with the estimated number -- I'm looking
about five (5) lines from the bottom -- column 5, the
product of columns 3 and 4, gives the estimated number

10   of deaths attributable to smoking in each age and sex
group.

        Now, for some reason we don't have the actual table
attached to this document, but I think we can find out
what it says. These values are then summed to yield an

15   age/sex adjusted estimate of thirty-three thousand six
hundred and three (33,603) deaths attributable to
tobacco use in Canada in nineteen eighty-three (1983) or
twenty-six percent (26%) of all deaths among persons
aged thirty-five (35) to eighty-four (84). Do you see

20   that?

A-   Yes.

Q-   Now, would you look at RJR-159, which is the published
version in nineteen eighty-eight (1988) of the paper,
and if you look at page one sixty-eight (168), Table 2,

25   and we look at the total number of deaths for nineteen

eighty-three (1983), which is at the bottom of the first

column of column -- of number -- of the group of columns

numbered as 5, we get the same number: thirty-three

thousand six hundred and three (33,603) for nineteen

5   eighty-three (1983) deaths.

A-   Yes.

Q-   So would it be fair to say that the -- the method, at

least the nineteen eighty-five (1985) study that's dated

January, nineteen eighty-six (1986), that had your name

10   on it for the first time, is in fact the predecessor and

uses the same numbers for nineteen eighty-three (1983)

as the final study published in the Canadian Journal of

Public Health?

A-   It would appear to be a predecessor. I'm not sure

15   whether it was the penultimate or where it fits, but it

does obviously appear to be a predecessor.

Q-   Right. But the fact is that the nineteen eighty-three

(1983) figures are precisely the same, right to the

number, thirty-three thousand six hundred and three

20   (33,603).

A-   Yes.

Q-   And, of course, you went on in the final version to use

the same method for the nineteen eighty-five (1985)

total mortality for Canadians?

25   A-   Yes.

Q-   And that hadn't been done by January of nineteen
     eighty-six (1986) when RJR-160 was actually created; am
     I correct?

A-   Yes.

Q-   And as we saw yesterday, the two (2) previous papers by
     Collishaw and Tostowaryk, which were June, nineteen
     eighty-four (1984) and it looks like some time in
     nineteen eighty-three (1983) respectively for RJR-A --
     I'm sorry, RJR-D and C, they came to significantly lower
     death figures, around twenty-four thousand (24,000) or
     so for nineteen eighty-two (1982), twenty-one thousand
     nine forty-three (21,943) for nineteen eighty-one (1981)
     and twenty-one thousand seven hundred (21,700) for
     nineteen sixty-seven (1967); am I correct?

A-   Yes.

Q-   You've had a chance to read them now, have you not?

A-   I didn't read these overnight. I left them in the car.

Q-   You didn't read these overnight, I see.

     And I suggest to you that those two (2) earlier
     studies by Tostowaryk and Collishaw used precisely the
     same method. They used the Godley -- the Godley
     relative risk figures rather than the Hammond relative
     risk figures which -- because the Hammond relative risk
     figures were considered to be too low, so they used the
     Godley figures and they used the same -- the same factor

for proportion of deaths attributable to tobacco use in

Canada that was used in the nineteen eighty-five (1985)

paper, RJR-160. The same method was used? Am I not

correct?

5 A- The same general approach was used. But I thought I saw

yesterday the fact that they used the Hammond relative

risk in one of the papers.

Q- No, no, let's look at them. I suggest to you they used

the Godley relative risk in both papers. It's certainly

10   in the later paper, but I suggest in both papers.

A- Table 1 in the earlier paper would appear to use the

Hammond estimates, yes.

Q- Yes, but there were two (2) -- but there were two (2)

approaches used in each study.

15 A- They are different though. The later paper uses

Godley's relative risk, which are higher for women in

particular. The earlier paper uses Hammond's estimates

which are from the late fifties (50s), early sixties

(60s) and they're substantially lower for women.

20 Q- The RJR-C which is the June, nineteen eighty-four (1984)

study that we've used all the figures from nineteen

sixty-seven (1967) to nineteen eighty-two (1982), and it

comes up with about twenty-four thousand (24,000) total

deaths in Canada for nineteen eighty-two (1982), used

25   the Godley study, didn't it?

AUDIOTRANSCRIPT, Division de Pierre Vilaire & Associes Ltee

A- It used the Godley study and came to lower estimates for unexplained reasons.

Q- Yes. And the next year when you got into the picture, the total number increased by just about ten thousand (10,000) using the same approach. That's a fact, isn't it?

A- Well, when I became involved, I introduced the method one (1) which is based on the Canadian data.

Q- Yes.

A- And this produced an estimate of about thirty-five thousand (35,000).

Q- Yes.

A- The published version of the paper has all the data to verify that. When you apply the Godley relative risk you get a very similar estimate.

Q- But using the Godley figures, using the approach that is used in Table 2 in a published article, when Tostowaryk and Collishaw used it without your help, they came to about twenty-four thousand (24,000) deaths per year.

A- They must have made a mistake.

Q- They must have made a mistake, yes.

    All right. Now, of course, if we look at the earlier papers and we apply the same analysis to them to find out how many of those excess deaths were over -- were people over the age of sixty-five (65) or age of

seventy (70), we'd probably, if we analyzed the figures,

find the same factors: fifty percent (50%) of the

deaths, approximately, were over the age of seventy

(70). People over the age of seventy (70) and about

5   two-thirds over the age of sixty-five (65).

Me EVRAIRE:

Well, objection...

Me CHERNIAK:

Q-   As we found when we went through the analysis of your

10   paper yesterday.

Me EVRAIRE:

My Lord, given the last answer by the witness that he

feels that the authors of the earlier papers must have

made a mistake, it's my view that's exactly as if he'd

15   said he doesn't consider those papers authoritative. On

that basis, it's my submission that my friend should not

continue to examine on those earlier papers, especially

given that the witness has only leafed through them and

said he hasn't carefully considered them in any event.

20 THE COURT:

First of all, that's not the question. And second of

all, it's overruled. You're dealing with the RJR-159

figures? It's easy to calculate.

Me CHERNIAK:

25   I'm dealing with RJR-159 figures which I went through

yesterday and which we demonstrated by just looking at

them, a simple process of addition.

THE COURT:

Yes, just add up the numbers and we'll get the answer.

5 Me CHERNIAK:

Just add up the numbers. And I'm, without taking the

time to do it, I'm suggesting to the witness that ...

THE COURT:

Well, we'll take the time to do it. We'll do it.

10 Me CHERNIAK:

Well, the problem is that, with respect to one of them,

one of them at least, the table...

THE COURT:

No, you're talking about his estimate in the public

15 papers. If you look at the numbers in the public

papers.

Me CHERNIAK:

Oh, I thought we did that yesterday, sir, and it showed

that almost exactly fifty percent (50%) of the deaths

20 were over aged -- seventy (70) and over. And if you

took the other -- took the deaths over sixty-five (65),

I think we came to the conclusion it was about

sixty-five percent (65%). I can do that again, sir, if

you like. I thought we did that in the evidence

25 yesterday. I think what the evidence shows, because I

added up these figures myself yesterday...

Me POTTER:

My Lord, in nineteen eighty-three (1983), it's

forty-eight point five seven percent (48.57%) and in

5   nineteen eighty-five (1985), it's fifty point three

three (50.33).

THE COURT:

Eighty-three ('83) is what? I'm sorry.

Me POTTER:

10   Eighty-three ('83) is forty-eight point five seven

percent (48.57%), seventy (70) and over, and eighty-five

('85) is fifty point three three percent (50.33%).

THE COURT:

Okay.

15 Me CHERNIAK:

Yes, and the figures for over sixty-five (65) come out

for -- for age -- for nineteen eighty-five (1985), come

out to sixty-three point two percent (63.2%) of the

deaths of people sixty-five (65) years and over. It's a

20   total of the -- the total of the deaths, the thirty-five

thousand some -- thirty-five thousand one hundred and

thirty-one (35,131) deaths in nineteen eighty-five

(1985); twenty-two thousand two hundred and four

(22,204) of those deaths are people aged sixty-five (65)

25   or over.

Q- Now, Dr. Wigle, are you aware of a paper that was
prepared in the Department of Health and Welfare by
persons named Ouellet, Romeder and Lance?

A- I'm aware they did some work on tobacco-related
5   mortality in the seventies (70s).

Q- They did a paper called "Premature mortality
attributable to smoking and hazardous drinking in
Canada". Are you aware of that paper?

A- I recall a paper -- that sounds like the paper I
10   remember.

Q- Yes, because on the examination for discovery -- I'm
sorry, at the trial in -- yes, at the trial, when Mr.
Collishaw was giving evidence -- and we find what I'm
going to read, My Lord, at Volume XXII, page
15   thirty-three fifty-two (3352) -- Mr. Collishaw was asked
this at line 15:

        "If we turn the page to page two (2), Mr.
        Liston draws the addressee's attention to a
        paper entitled "Premature Mortality
20   Attributable to Smoking and Hazardous Drinking
        in Canada" prepared some time ago in the
        Long-Range Health Planning Branch, which shows
        the relative importance of risk factors such
        as alcohol and tobacco and how they can be
25   quantified."

3/0127   He goes on to say -- and what follows now, My Lord, is a

                quote from Mr. Liston:

                        "Were this sort of analysis extended to other

                        major risk factors such as physical activity,

     5   nutrition, stress and hypertension, the

                        information thus obtained would be useful in

                        developing priorities policies programs that

                        address these risk factors."

                And then Mr. Collishaw is asked this question:

    10   "Can you confirm, Mr. Collishaw, that these

                        other major risk factors were known to your

                        department throughout the nineteen eighties

                        (1980), that there are other major risk

                        factors?

    15   A: Yes, there are. In fact, I worked in the

                        Long-Range Health Planning Branch at the time

                        this document was prepared, and while I'm not

                        an author of the document, I'm quite familiar

                        with it and from that document and others that

    20   were prepared at that time, it was quite clear

                        to us that by any measure tobacco use was the

                        most serious of all health hazards and caused

                        more mortalities than all the others

                        combined."

    25   So, Mr. Collishaw indicated that he was aware of such a

paper. I'd like to show you a copy of the paper that
Mr. Collishaw was referring to and ask if you -- you can
now recognize it as -- as something that you know about?

A- I'm not sure I've seen this version of the -- of the

5   work that's reported, but I've seen something similar to
this.

Q- Yes. Was it actually published?

A- There was the working report, as I recall, was published
just as a working report. I think it had an orange

10   cover and just said something to the effect that it was
a working report or a working document or some such.

Q- Certainly this was known to at least one (1) of the
authors of this -- of the report. It was known to
Collishaw.

15   A- I'm also aware that there was this type of work done
earlier.

Q- All right. I'm going to tender this, then, as the next
-- as the next RJR exhibit, My Lord. We'll give that
what number, sir?

20   THE CLERK:

RJR-161.

Me CHERNIAK:

161?

THE CLERK:

25   161.

Me CHERNIAK:

Q-   Now, just looking at this, sir, Dr. Wigle, we see that
      the heading is "Premature Mortality Attributable to
      Smoking and Hazardous Drinking in Canada, Volume 1,
5   Summary". Now, would you look, please, at page four
      (4)? Perhaps, before I ask you any questions on page
      four (4), tell us who Ouellet, Romeder and Lance are or
      were.

A-   Barbara Ouellet and Jean-Marie Romeder I know and they
10   were working in Long-Range Planning. I don't know this
      person, J. M. Lance.

Q-   All right. What was their position? What is their
      background? What is their qualifications?

A-   Romeder is a sociologist, I believe. I'm not sure what
15   Ouellet's background is.

Q-   Now, let's look at page four (4). Do you see the
      heading -- now, look at heading 2.3 on page four (4),
      "Premature mortality", and the authors say this:

             "It has been decided to restrict this report
20   to the premature mortality occurring between
             ages 1 and 70."

      It's page four (4), My Lord.

THE COURT:

      Right.

25

Me CHERNIAK:

Item 2.3.

Q-   And then, in the next paragraph, the authors go on to

say why they did that:

5   "Deaths which occur after age 70 or 80 cannot

be considered as preventable as earlier deaths

since many of them result from causes largely

associated with unknown factors related to

aging. From the point of view of the priority

10   for major health problems, it is more

important at older ages to reduce disability

rather than death. This is well put into

perspective by Sir Richard Doll, who said: 'I

would therefore rather aim to reduce mortality

15   at young ages and to relieve disability at

older ages.'"

The point is for the purposes of this departmental

study in nineteen seventy-seven (1977), the researchers

did not think it appropriate to use mortality after age

20   seventy (70). I take it that you didn't -- you and your

colleagues didn't -- didn't use the same restriction for

the same reasons, did you?

4/0126   A-   We did not use the same restriction because life

expectancy in Canada has increased by several years

25   since the time of this report. The average life

expectancy of Canadians now is seventy-five (75). At

the time of this report, it was seventy (70).

Q-   You say that there is a difference of five (5) years

between age in nineteen seventy-seven (1977) and

5   nineteen eighty-five (1985)?

A-   The seventy-seven ('77) report would not have had

seventy-seven ('77) mortality data. It probably had...

Q-   No, of course not. It would have had the -- it would be

based on the Canada Census of nineteen seventy (1970)

10   and the mortality basis that you would have had would

have been based on the Canada Census of nineteen eighty

(1980).

A-   Well, I know that the...

Q-   You're not suggesting that there was a five (5) year

15   difference in the life expectancy of Canadians between

nineteen seventy (1970) and nineteen eighty (1980), are

you?

A-   Well, the current average life expectancy of Canadians

as of nineteen eighty-six (1986) was seventy-five (75).

20   Q-   The point is, Dr. Wigle, that the fact is that deaths

which occur between ages seventy (70) -- or after age

seventy (70) or after age eighty (80), as these authors

indicate, in fact are largely associated -- or many of

them are, as the authors say here, largely associated

25   with unknown factors related to aging. It's a fact of

life, everybody dies from something, don't they?

A- Everyone dies of something, but I don't agree with the statement that the deaths among people in their seventies (70s) are largely due to unknown factors.

5 Q- Any rate, from -- with your study, you've included -- with the study that you did in nineteen eighty -- that you became involved in in nineteen eighty-five (1985), ultimately published in nineteen eighty-eight (1988), you included the -- as fifty percent (50%) of the total

10   of the deaths that was thought to be considered important, the deaths after age seventy (70), which other people in your department in nineteen seventy-seven (1977) had said in this report should not be included in a very similar study -- wider, because it

15   included alcohol as well as tobacco -- because deaths over age seventy (70), many of them result from causes largely associated with unknown factors? You didn't take that into account at all, did you?

A- In our report, there were two (2) methods. The second

20   method did include deaths up to age eighty-four (84), of which about fifty percent (50%) of the deaths were over age seventy (70). The first method only takes the deaths up to age seventy-nine (79), so that if you wanted to exclude deaths above the average life

25   expectancy, you would only exclude the deaths between

the ages of, say, seventy-five (75) and seventy-nine

(79), which would be much less than fifty percent (50%).

Q- Dr. Wigle, you didn't even put in a reservation in a

footnote or in any part of the article itself about the

5   dangers or the problems associated with using deaths

over age seventy (70), did you?

A- The...

Q- Did you?   Can you just answer the question?   I mean,

give your explanation after.   Did you?   Is there

10   anything that we'll find in either the nineteen

eighty-six (1986) article or the ultimate published

version that refers to the problem identified in your

own department with using deaths over age seventy (70)?

A- My Lord, this is not a question that can be answered yes

15   or no, because...

THE COURT:

Q- Yes, it can.

A- ... there is a problem -- well, there is, My Lord, the

-- it's alleged that there is a problem considering

20   deaths over the age seventy (70) as being preventable.

I don't accept that, so I cannot say I ignore the

problem that existed, because it did not exist.   It's a

very arbitrary decision to say that deaths over the age

of seventy (70) are not worth looking at.   I'm not sure

25   that people in that age range would agree.   The fact is

that many people are very healthy in their seventies

(70s) and there has certainly been studies in recent

years showing that even people over age sixty-five (65)

who quit smoking do have reduced mortality, so that I

5   just cannot accept that we ignored a problem which

exists, because I don't believe it does exist.

Q-   So the answer is: no, you did not put any reservations

with the explanations that you have given because you

didn't feel there was a need for reservations to be

10   made. But there was no -- no reservations, is that the

answer, and the explanation is that you don't believe

you needed any reservation?

A-   Yes.

Me CHERNIAK:

15 Q- So what you're saying is that you considered the caution

that is expressed by Ouellet et al with respect to the

use of deaths after age seventy (70) and rejected it.

Is that what you're telling us?

A-   I'm...

20 Q- Or you're not -- didn't consider it at all?

A-   No, I'm not stating that.

Q-   Well, tell us! Did you not consider it all? Did you

totally ignore it or did you consider it and say:

Ouellet et al and people who think that way are wrong

25   and we're not going to use it, because we know Collishaw

knew about this study. Maybe you didn't, but Collishaw
did and he's the lead author here.

A-   Well, the simple situation is that there is no agreement
as to -- at what age life becomes less valuable and that
5   diseases become less preventable.

Q-   We're not talking about value of life, we're talking
about whether or not it is appropriate, when trying to
determine how many deaths in Canada are attributable to
a particular factor, in this case tobacco, you should or
10   should not go as high as age seventy (70) or age eighty
(80) and just include those deaths as being exactly as
valuable in the study. I don't mean valuable in terms
of life, I mean as valuable in making the point of the
study, as deaths at an earlier age. All I want to know
15   is: did you give no thought to it at all, you and Wigle
and Tostowaryk when you were sitting around your table
discussing what was going to go into this study, or did
you consider what Ouellet and others like them had said
and say: we don't think we should accept that caution.
20   We'll just use the older ages. Which was it?

A-   The -- in the estimate that I did, which was method one
(1), we chose seventy-nine (79) as the upper age limit
because it is within the range of life expectancies for
Canadian men and women. Canadian women now have a life
25   expectancy very close to eighty (80). The other factor

we considered was that at some point it does become less
meaningful to talk about prevention. For example, I
don't think anyone would talk about preventing deaths
over the age of one hundred (100). People might not

5   agree with preventing deaths over the age of ninety (90)
as being a terribly practical goal. But as you come
down, it becomes less clear where you should draw the
line. Seventy-five (75), seventy-nine (79) seems an
appropriate age range based -- not because life is less

10   valuable thereafter or that deaths are less preventable,
it's a more realistic goal to set that we should be able
to prevent premature deaths up to age eighty (80)
without going to extreme measures.

Q- Now, Dr. Wigle, having made that speech would you now

15   come back to my question, because you haven't answered
it.

My question is: did you and Wigle -- did you and
Collishaw and Tostowaryk consider not using deaths over
age seventy (70) when you were preparing the nineteen

20   eighty-six (1986) paper which ultimately became the
nineteen eighty-eight (1988) published paper or did you
not? That's my question. Either you did or you didn't.

A- My Lord, I don't believe I can answer the question any
better than I already have because we did not approach

25   this in a simplistic way with preconceived notions.

Q- So the answer is...

THE COURT:

So the answer is: no?

Me CHERNIAK:

5   Q- Would you answer it? I think the answer is...

A- The answer is not exactly no, because it's not that we
   did not -- if I say: no, it means that we did not
   consider excluding deaths at a lower age limit.

THE COURT:

10 Well, that's the question: did you or did you not
   consider. That's the question. It's either yes or no
   or yes, because or no, because, but I mean it's either
   yes or no.

A- We considered -- for method one (1) we considered where

15 to draw the line, but we didn't start with seventy (70)
   as a benchmark because -- just because Ouellet et al
   state that in that report doesn't mean that it's
   accepted by the department or the country at large.

Me CHERNIAK:

20 Q- Well, let's move on.

   Now, we talked about peer review. One of the
   things that -- one that in -- in the scientific
   endeavors, as I understand it, people prepare papers
   like you and Collishaw and Tostowaryk did that became

25 RJR-160 and ultimately they're submitted to journals for

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		publication and undergo what's called peer review; yes?
	A-	Yes.
	Q-	And that's what happened here?
	A-	Yes.
5	Q-	And am I correct that the first journal that it was submitted to was the Canadian Medical Association Journal?
	A-	Yes.
	Q-	And I suggest to you that it was this very document,
10		RJR-160, dated January, nineteen eighty-six (1986), that was submitted to the Canadian Medical Association Journal?
	A-	Which one is 160?
	Q-	The one you had in front of you, the one dated January,
15		eighty-six ('86) with your name on it.
	A-	That's -- I can't be sure it is, because it doesn't have the tables in it and I don't recall exactly what version was sent to the journal. This went through several drafts.
20	Q-	Well, the fact is it was rejected by the Canadian Medical Association Journal; wasn't it?
	A-	Initially it was accepted with revisions, but then the editors changed and the revised version was rejected.
	Q-	Well, wait a minute. What do you mean initially? When
25		was the initial? We have this paper dated January,

nineteen eighty-six (1986). When do you say it was

accepted originally?

A-   I don't recall the date, but we submitted -- as I

recall, the paper was submitted. We were sent back

5   referee's comments, we revised the paper, we sent it

back and then it was rejected.

Q-   Well, I'm going to suggest to you it was never accepted,

whatever. It was rejected out of hand by -- with the

referee's comments?

10   A-   Well, it's not accepted until it's accepted, but the --

I believe there was a round in there where we were asked

to resubmit with revisions, which is normally associated

with being accepted, but obviously until it's in the

journal and printed, it's not in.

15   Q-   Well, if there is such a thing, undoubtedly you'll get

the opportunity to show it to us, but I'm going to show

you a letter from the Canadian Medical Association

Journal dated November the fifth (5th), nineteen

eighty-six (1986) to Mr. Collishaw. Again, this is a

20   government production. It has government production

numbers on it.

Me EVRAIRE:

Well, again, I'll correct my friend. It was in the

government files. It's not something produced by us for

25   the purpose of relevance or anything else.

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DONALD T. WIGLE Resp., Cr.-Ex.

Me CHERNIAK:

    Oh, I'm sure of that, My Lord. It'll become very

    obvious why it's not.

        May this be the next RJR exhibit, My Lord.

5   THE GREFFIER:

    RJR-162.

Me CHERNIAK:

Q- Now, this is dated November the fifth (5th), nineteen

    eighty-six (1986) and it's a letter from the Canadian

10   Medical Association Journal, Peter Morgan, the

    scientific editor. That's a man that you have actually

    collaborated with on -- on one (1) of the published

    works -- one (1) of your published works that we saw

    yesterday, isn't it?

15 A- Actually, the letter is signed by Bruce Squires.

Q- Well, it may be signed by Squires but it's -- it is

    written -- it is typewritten -- the typewritten

    signature is Peter P. Morgan who -- and Squires -- Dr.

    Squires has signed for Morgan, the scientific editor?

20 A- Yes.

Q- Right?

A- Yes.

Q- Presumably Squires had Morgan's authority to do so,

    wouldn't you think?

25 A- One would presume so.

	Q-	Yes. Anyway, my question was, is Morgan the same Morgan
		who you and -- who collaborated with you in one (1) of
		the publications that we reviewed yesterday?
	A-	Yes.
5	Q-	It's the same Morgan, yes?
	A-	Yes.
	Q-	All right, let's just read what Dr. -- is it Dr. Morgan
		or...
	A-	Yes.
10	Q-	Yes, it is Dr. Morgan -- what Dr. Morgan or Dr. Squires
		said to you. By the way, Dr. Squires is presently the
		editor...
	A-	Yes.
	Q-	...as I understand it, of the Canadian Medical
15		Association Journal, yes?
	A-	Yes.
	Q-	And he's the overall editor of the journal, isn't he?
	A-	I'm not sure of his exact title.
	Q-	Well...
20	A-	He's certainly the scientific editor.
	Q-	So he's not just some -- some unqualified person in
		there, he is the present editor of the journal as I
		understand it?
	A-	Yes.
25	Q-	The -- what Dr. Morgan and/or Dr. Squires says is this:

"The paper by you, Dr. Tostowaryk and Dr.

Wigle, has now been reviewed. We regret the

length of time it has taken us to produce this

review. It is a situation we run into

5   sometimes with manuscripts that are submitted

in the summer. When we reviewed the paper

initially, we considered returning it to you

as being too specialized for our journal but

because of the possibility that this paper

10   would belong with the impressive body of work

that you and Dr. Wigle have already published

in the C.M.A.J., we decided to have a

statistician review it."

I'm just stopping there. I don't read into that that

15   there was ever a submission of this paper between

January, nineteen eighty-six (1986) and the summer when

apparently the paper -- this paper was submitted, that

was accepted. That's not what I would take from what

Dr. Morgan says there but maybe there is something we

20   don't have. Does that refresh your memory, Dr. Wigle?

A-   Well, I know there was never a version that was

accepted. I thought because of the long time interval

it had been returned for revision but apparently we

didn't get a chance to revise it.

25   Q-   Well, are you withdrawing what you said because I -- I

read from this that it was only submitted once, that

their initial reaction was to reject it out of hand as

being too specialized but because of their association

with you, they decided to review it more carefully.

5   They did, it took a long time, and here's the letter?

A-   Yes.

Q-   That's more likely what happened, isn't it?

A-   Yes.

Q-   "In summary ..."

10   -- Dr. Morgan goes on --

      "... in summary, the main objections to your

      presentation are:

      1. The application of stratified

      relative risks derived from old American

15   data to the current Canadian population,

      that is using the Hammond and/or Godley

      American data."

      That's what he means, isn't it?

A-   The Godley data.

20   Q-   All right.

      "2. The inexplicable irregularity of those

      relative risks.

      3. The lack of novelty of the findings.

      4. The technical problem of attribution of

25   death to smoking, especially in regard to

death from coronary heart disease, in which

there are important etiological co-factors and

a number of confounding variables that are not

accounted for in the paper. In addition, from

5   the editorial point of view, the paper's

concern with methods puts it somewhat outside

the scope of our readers' interest.

          We feel that the importance of the topic

does not overcome the concerns about the

10   paper's technical problems and lack of appeal

to the general reader, we regret that we

cannot consider the paper for publication and

hope the reviewers remarks will enable you to

prepare the paper for a more specialized

15   journal."

     So it was rejected, yes?

A-   It was rejected on the recommendation of one (1)

     statistician. Normally, the Canadian Medical

     Association Journal uses at least two (2) reviewers.

20   Q- Is the -- is the answer to my question: yes, it was

     rejected?

A-   *The paper was rejected based on the recommendation of*

     one (1) statistician.

Q-   Well, let's look at the next -- the very next page

25   that's attached to this because it is the report of the

statistician that we referred in the letter, and you'll

see at the very top -- it's a little blocked out in my

copy but its readable. C.M.A.J. reviewer report, gives

a reference number, reviewer number two (2). It appears

5   that whoever this -- and, as you say, they are

anonymous. Whoever this reviewer was, he was reviewing

-- he was described in this -- in his own document as

reviewer number two (2)?

A-   That's true, but what happens is that when the journal

10   gets papers, they send them out to our reviewers who

they number. It looks like reviewer number one (1) did

not reply or did not reply in time because otherwise

that reviewer's report would have been included. So

they heard from reviewer number two (2).

15 Q-   Okay, let's just see what reviewer two (2) said, who was

a statistician, right?

A-   Yes.

Q-   He says:

    "The finding ..."

20   -- which he puts in quotation marks --

    "... that in 1983 around 34,000 deaths in

    Canada of persons aged 35 to 84 -- or roughly

    a quarter of all deaths in this age group --

    could be attributed to tobacco use will

25   oppress neither the smoking nor the

anti-smoking lobby. It is in no way exciting,

and for obvious reasons it is close to

expectation from U.S. experience. The methods

..."

5   -- also in quotations marks --

"... of obtaining that estimate are not

particularly useful. There must be grave

doubts about confining results from surveys

nearly 20 years apart in 2 different

10   countries."

Now, that means -- that's the combining of the Godley

survey in the sixties (60s) on the one hand and the

population attributable risk figures from the nineteen

eighties (1980s) in Canada. That's what he means, isn't

15   it?

A-   Yes, he's referring to the second method.

Q-   Yes. And then he deals with the question of

originality. And he says:

"It would seem to be an attempt to gain public

20   mileage out of a Ph.D. ..."

-- and it must be a Ph.D. thesis. Next page:

"Are the conclusions justified? Not in my

view ..."

-- says the statistician. On page three (3) it is

25   stated that -- last paragraph -- that:

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"Cancer, coronary heart disease and
chronic obstructive lung disease account
for only about 70% of the excess deaths
among smokers. Then the estimate of

5   32,200 tobacco-related deaths in 1983
obtained as specified proportions of
death from these causes should be
multiplied by 100/70. This correction
yields an estimate of 46,000, which is

10   far from the figure of 33,603 obtained by
the preferred, or method #2. Yet in the
first sentence of the discussion, page 8,
it is stated that the 2 methods for
estimating deaths attributable to tobacco

15   use presented here produced similar
results, as they do not, says the
reviewer. Which estimate is closer to
the truth?
            It is possible that the two estimates are

20   compatible, that would be so if their errors
were as high as this reviewer believes they
may be. However, the problem of errors is not
dealt with adequately: see below."
      Let's look at the -- at some of the other criticisms.

25   Under the heading: "Are the Tables and Figures

Helpful and Clear?"   And he deals with Table 1 and then

he deals with Table 2, and let's see what he says about

Table 2, which deals with method two (2), as I

understand it.

5   "As columns 1 and 2 are given ..."

-- this is the last paragraph on the page --

           "... are given for each of 10 age groups, sex

           by sex, it is natural to try and identify

           patterns. In fact the figures vary in quite

10   astonishing fashion without any of the

           regularity usually found in corresponding new

           material."

And he says:

           "This raises a question related to the paucity

15   of data. Is the lack of pattern real or does

           it reflect mainly sampling error?"

And then he goes on.

           And then let's look at the next page.

           "Does the method examine the problem studied?

20   Yes, with important provisos. First, are the

           relative risks based on 20,000 deaths, 1968 in

           the U.S., in any way relevant to Canadian

           experience in the 1980s?

                Second, can smoking histories, provided

25   by surviving family members of the deceased be

considered in any way comparable to those

obtained from a sample of adults through

household interviews?"

In other words, the Godley method being the -- derived

5   from the family members of the deceased and the

population attributable risk by the sample of adults

through household interviews. That's what he's talking

about; isn't it?

A-   Yes.

10   Q-   Yes.

"Third, do ever smoked and never smoked mean

the same in all situations for which

comparisons are made?

Fourth, is the difference between

15   mortality of ever smokers and that of never

smokers truly an excess attributable to

smoking? The answer to this last question is

a clear no, unless the characteristics of ever

smokers and never smokers were closely similar

20   in all respects, in all relevant respects,

within each age group for each sex, e.g. or

that is, same socio economic status, same

environmental exposure, same lifestyles, other

than smoking, same ethnic origins."

25   And on the next page, the reviewer goes on to say:

"This reviewer's opinion is that the provisos

have not been met or at least have not been

shown to have been met."

So based on, in part at least, that review, the Canadian

5   Medical Association rejected this for publication;

right?

A-   Yes.

Q-   Now, is that peer review?

A-   It's peer review by one statistician.

10   Q-   Yes. Well, it's not peer review by one statistician,

it's peer review by one statistician who gave by -- and

that's all they told you about, but who gave a report

which was then reviewed by the scientific editor of the

Canadian Medical Association Journal, Morgan and

15   presumably Squires, who is also a scientific editor or

the editor of the Canadian Medical Association Journal.

Is that peer review or not, Doctor?

A-   It's peer review, but not the normal peer review that

C.M.A.J. does.

20   Q-   Well, it's peer review that you didn't like very much,

did you?

A-   Well, we've had other papers rejected and we've revised

papers. The peer review process is designed not just to

reject papers, but to help the authors improve them and

25   sometimes publish them in a more appropriate journal.

Q-   Yes, but the fact is, Doctor, that notwithstanding that

      criticism, none of those criticisms were met in the

      final published paper. If we look at the final

      published paper in the Canadian Journal of Public

5   Health, no significant change was made in the results

      that related to any one of those criticisms, was there?

A-   The -- okay. The answer is: no. The explanation is as

      follows.

THE COURT:

10   Good.

Me EVRAIRE:

      Now, we're getting somewhere.

Me BAKER:

      See, Mr. Cherniak, if you say it often enough, people

15   start believing it.

A-   The -- okay. This referee makes some points. Some of

      them are more valid than others. For example, are the

      old U.S. relative risk estimates applicable to Canadian

      population in the nineteen eighties (1980s)? The answer

20   is yes and no. The -- no, it would be preferable to

      have more current estimates from Canada. The answer is

      yes, in that the relative risk estimates from the Godley

      study were undoubtedly the best available at that time

      -- at least when broken down by sex and age.

25   What the referee seems to miss, though, is the

strengths of the first method which is based entirely on

Canadian data and which did control for other risk

factors. The referee seems to think that all we looked

at was smoking. In fact, in the Nutrition Canada Cohort

5   on which the first method is based, we looked at

cholesterol, high blood pressure, alcohol, obesity and

so -- diabetes and so on. The relative risk estimate

that we used from the Nutrition Canada Cohort in method

one (1) was adjusted for the only two (2) risk factors

10   that affected the smoking relative risk and that was

hypertension and diabetes. We did not find that

cholesterol was a confounder.

So, yes, this statistician raised some valid points

about method two (2), seemed to ignore the strengths of

15   method one (1).

Me CHERNIAK:

Q-   So the fact is that when you resubmitted the article to

the Canadian Journal of Public Health, in effect it was

the same article without any changes, wasn't it?

20 A-   I think we added the confidence limits in Table 2.

Q-   Yes. And of course, ultimately you added in figures for

nineteen eighty-five (1985) using the same methods,

didn't you?

A-   The final version has nineteen eighty-five (1985), yes.

25 Q-   Yes. Now, you next submitted it to the Canadian Journal

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              of Public Health...

    A-    Yes.

    Q-    ... another publication in which you had written from
          time to time?

 5  A-    Yes.

    Q-    And among the people on the editorial board of that
          publication is yourself?

    A-    Yes.

    Q-    And you had been for some time?

10  A-    Yes.

    Q-    And it underwent peer review as well, did it not?

    A-    Yes.

    Q-    And the peer review that it underwent there was mixed.
          One peer reviewer thought that it was wonderful and

15        should be published immediately and the other one
          thought that it should be totally rejected, right?

8/0041
    A-    Yes.

    Q-    Let's take a look at the breakdown of that.  I'm showing
          you a letter to Mr. Collishaw dated May thirteenth

20        (13th), nineteen eighty-seven (1987), from the Canadian
          Journal of Public Health.

    THE CLERK:

          RJR-163.

    Me CHERNIAK:

25        163.
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Q-   And just looking at the letterhead, we see your name

      there. These people on the left-hand column are what,

      members of the editorial board?

A-   I didn't know the list was that long, but I assume we're

5   all members of the editorial board.

Q-   Yes, and there's you and there's a man named Fernand

      Turcotte as well.

A-   Yes.

Q-   And who is he?

10   A-   He's...

Q-   He's the gentleman who's been sitting in this courtroom

      for the last while, isn't he?

A-   Yes.

Q-   Another government witness?

15   A-   Yes.

Q-   Yes. All right. And this letter dated May thirteenth

      (13th), nineteen eighty-seven (1987), to Mr. Collishaw

      and it's "Re: mortality attributable to tobacco use in

      Canada", and signed by Dr. Last, the scientific editor

20   of that journal. Am I correct?

A-   Yes.

Q-   Who says that he is interested in publishing the article

      in the journal:

            "Some revision is necessary before we can

25   proceed. Please consider the comments made by

our reviewers, copies enclosed, and make your

revisions as you think best. Once the revised

copy is returned to me it will be edited for

publication as soon as possible."

5   And in fact, it was ultimately published in that

journal?

A- Yes.

Q- And let's look at the two (2) peer reviews that were

done here. First of all, is this peer review?

10 A- Yes.

Q- It qualifies under peer review?

A- Yes.

Q- All right. And reviewer one (1), we have a one (1) page

report in which he gives the highest rating for -- for

15   everything, and says "Published as highest priority",

and says:

"These are extremely important data. Please

make available to potential users (activists

in the campaign against smoking) by publishing

20   as soon as possible. This paper is well

written and, in my opinion, needs no revision.

There are a few typos; see abstract."

Would it fair to say that this anonymous reviewer was

probably anxious for whatever reason to assist those

25   potential users that he describes as activists in the

campaign against smoking by getting this material out to

them as soon as possible? Would that be a fair

inference?

Me EVRAIRE:

5   Objection. That's not an answer that this witness can

give to this Court.

Me CHERNIAK:

Anybody who reads it can give that answer.

Me EVRAIRE:

10   Well, anyway my friend puts the question and I make an

objection to it.

THE COURT:

You're asking him an opinion which is not within his

boundaries as expert.

15 Me CHERNIAK:

As long as we get it.

THE COURT:

If anybody can do it, I mean...

Me CHERNIAK:

20   As long as we can have that ruling applied throughout,

My Lord, I'm content. I guess, My Lord, some things are

too obvious for words.

Q-   So that's the one -- that's one of the peer reviews, not

very helpful, hardly -- hardly critical, is it? Would

25   that really qualify in your view as critical,

intellectually rigourous peer review?

A-   No. This seems to be -- this first reviewer seems to have gone through it quickly and not taken time to raise any critical points whatsoever. This is not uncommon in

5   peer review. It's very common to get back two (2) or three (3) peer review reports, one of which says it's the greatest study ever written and another says it should be shredded and forgotten ...

Q-   Yes.

10   A-   ... and then the scientific editor has to judge which referee to believe.

THE COURT:

Q-   Obviously he or she was enthusiastic about it.

A-   Yes.

15   Me CHERNIAK:

Q-   But then we have another reviewer whose ultimate opinion was: "Reject the manuscript" and who gave it a rating for originality of two (2), importance: the lowest of four (4), clarity: three (3). He said:

20   "The aims are clearly stated: yes.

          Supporting tables are clear and relevant:

          yes. Do the results appear valid: no.

          Are the conclusions justifiable on the

          basis of the facts presented: no."

25   -- and advised that the manuscript be rejected, and who

said in a typewritten report:

"This is a very interesting paper on an
important public health problem. The paper is
well written and the data analysis appear to
be appropriate. However, the validity of the
results are in question for the following
reasons.

1) The data sources used for the calculation
in columns 1 and 2 in Table 2 are unpublished.
The conclusions of importance as that -- as
have been derived from this paper should be
based on data sources that have been
validated.

2) Mortality from smoking depends on the
amount smoked, duration of smoking and pattern
of smoking in relation, et cetera. It is
simplistic to apply a ballpark relative risk.
In fact, what is used in the paper appears to
be the odds ratio to all the ever smoked
category, which presumably includes short-term
smokers as well as smokers."

Now, just stopping there. Did you get for us the
definition that was used for "ever smokers"?

A-   Yes.

Q-   And what was it?

A— Ever smokers in Method one (1), which is the -- based on the Nutrition Canada cohort, were people who had smoked for at least -- at least one (1) cigarette per day for at least one (1) year.

5 Q— So -- so you used -- in Table 1, you considered as equal in value, determining who the smokers were, a person who smoked one (1) cigarette a day when -- when he or she was a teenager, for a year and then quit. And as far as your paper is concerned, that's the same as a two (2)

10 pack a day smoker for forty (40) years? They're both ever smokers, right? Yes?

A— The answer is yes, they are both categorized as ever smokers but the -- the effect of this in determining the relative risk for ever smokers is to -- to arrive at a

15 risk estimate that represents the average overall types of ever smokers. Some of whom smoked very little, others of whom smoked a lot, but it's the average risk for that group of people categorized as ever smokers.

Q— But the fact is that in the mid-nineteen eighties

20 (1980s), approximately three and half ($3\frac{1}{2}$) to four (4) million Canadians had quit smoking? In other words, three and half ($3\frac{1}{2}$) million Canadians were former smokers, just based on the rough one (1) to ten (10) ratio that we Canadians seem to like to use when

25 compared to the American statistics, right?

A- I don't know that that's true.

Q- Yes; and we've heard Doctor Doll say that, as I think we
    talked about yesterday, that the risk goes down or
    doesn't increase, doesn't go down significantly or, at
5   the very least, doesn't increase when people start --
    when people stop smoking?

A- He was referring to lung cancer.

Q- Yes.

A- Not coronary heart disease or emphysema or stroke.

10 Q- All right, at any rate, as long as we now know who is
    contained in these ever smokers -- of course, the -- the
    percentage of ever smokers gets up to, in most of these
    tables, somewhere between seventy (70) and eighty
    percent (80%)?

15 A- Yes.

Q- Yes, and of course, we know that the current smokers
    are...

A- For men, that's true.

Q- Yes, and -- but in fact, current smokers amount to
20 something under thirty percent (30%) for men, amount to
    something under thirty percent (30%) of the population,
    isn't that true?

A- As of nineteen eighty-five (1985), among ever smokers,
    about forty percent (40%) were current smokers -- this
25 is men, and about thirty-five percent (35%) were

ex-smokers.

Q-   And for females, the figures are lower?

A-   For females, about twenty-five percent (25%) were

     current smokers and about twenty-two percent (22%) were

5   ex-smokers.

Q-   Yes, and those figures have gone down since?

A-   Since nineteen eighty-five (1985).

Q-   Yes?

A-   Yes, undoubtedly, they've gone down a bit.

10   Q-   Yes. Any rate, what the reviewer here was saying, that

     he's criticizing the paper because the ever smoked

     category presumably includes short-term smokers as well

     as ex-smokers and -- but the paper makes no allowance

     for either that factor or the amount smoked, duration of

15   smoking, pattern of smoking, inhalation, et cetera, and

     the reviewer is correct in stating that the paper makes

     no allowance for any of those things, isn't the

     reviewer?

A-   No, the reviewer is not correct.

20   Q-   Not...

A-   Because the -- the relative risk estimate for ever

     smokers that's used in method one (1) is the average

     risk for -- for smokers of any type, current or ex --

     two (2) pack a day or two (2) cigarettes a day. It's

25   averaged over the whole group. If you broke that down

into current and ex-smokers, it would be higher for

current and lower for ex and higher for heavy smokers

than lighter smokers, but the average is valid for the

whole group.

5   Q-   The -- what's the definition of ever smokers for method

two (2)?

A-   It would be whatever method -- whatever definition was

used in the nineteen sixty-six (1966) or sixty-seven

('67) survey of smoking habits that Godley used.

10 Q-   And you don't know that?

A-   Well -- no, I don't, but I can say that normally in

these surveys the definitions are quite similar. Usually

some effort is made to get -- to not include as smokers

or ex-smokers people who just barely experimented with

15   smoking. Often the limit used is a hundred (100)

cigarettes in a lifetime or the equivalent in other

forms of tobacco.

Q-   So, what you're saying is that although this is your

paper, a) you don't know what the definition of ever

20   smoker is in Table 2? Am I correct -- you simply do not

know? You -- you cannot tell us what the term ever

smoker means in your own paper re Table 2 -- is the

answer to that question yes?

A-   No, the answer is no, I can't tell you for sure.

25 Q-   No, you can't tell me.

A-   Which -- which the -- the implication, though, is that
     regardless of what definition they use, the -- let's,
     for example, in the Godley study, if they used one (1)
     definition in the survey and another definition in the
5   mortality part, that would be not ideal but it would not
     change the relative risk estimates very much. It would
     only be, at most, a small change in the relative risk
     estimate.

Q-   Doctor, I'm trying to determine the intellectual rigour
10   that was applied to the preparation of this paper. Is
     the answer that you cannot tell us what ever smoker
     means in the -- in tab -- in the published paper, we
     have Table 2 and in Table 2 is column one (1), "Relative
     risk for ever smokers", column two (2), "Proportion of
15   ever smokers in Canada" and I am asking you, Doctor,
     tell me what the definition is that was used by you and
     your colleagues for the words "ever smokers" that are
     contained in your own table, and you're telling me that
     you can't tell me that?

20   A-   I told you that I could tell you the method for method
     one (1), that I'm not sure of the method used in method
     two (2).

Q-   Yes, and -- but it may be something like ever smoker may
     be, as I understood what you said a few minutes ago, it
25   may be something like anybody who has ever smoked a

hundred (100) cigarettes in their lifetime is classified

in the ever smoker category?

A- That's a definition that's commonly used.

Q- Commonly used, yes. Okay, at any rate, dealing with

5   criticism two (2) by the reviewer from the Canadian

Medical -- from the Canadian Public Health Journal --

Canadian Journal of Public Health, he made a criticism

about the mortality estimates and in the -- and you

ultimately paid no attention to that criticism, you made

10   no change, did you?

A- You're referring to point number two (2)?

Q- Point number two (2)?

A- So what is the question?

Q- The question is that you paid no attention to that

15   criticism when you resubmitted the paper, didn't have

any changes in it that relate to that criticism, right?

A- The -- we did not change our relative risk estimate

because the referee's point is not valid.

Q- Well...

20 A- When we...

Q- Is the answer no? I mean...

THE COURT:

Well, no, your question was two-fold. Did you pay

attention? He may have paid attention. Did he make any

25   changes, the answer is no, we didn't make any changes.

Me CHERNIAK:

    All right.

THE COURT:

    But it was two-fold. He may pay attention to somebody

5   saying something but not agree and therefore not change.

    This is what he did, as I understand his testimony.

Me CHERNIAK:

Q- So is the answer that you made no changes?

A- We did not make any changes.

10 Q- Thank you. Let's deal...

THE COURT:

    Would that be time for a break?

Me CHERNIAK:

    Yes, good time.

15

    SHORT RECESS

Me CHERNIAK:

Q- Now, criticism number three (3), the reviewer says:

20   "Excess mortality from smoking is from causes

       which have been shown to be associated with

       smoking. It is too casual to suggest that

       there is an overall increase in mortality from

       all causes as the authors have attempted to

25   show. I did a little bit of calculation from

the published vital statistics as follows ..."

And then he goes on and he lists his calculations and he

says:

"Based on his summary, he has reason to

5   question the validity of the results. As a

result, he said, the paper in its present form

is unacceptable for publication."

Now, am I correct that you did not take into account as

well, in the published version, the criticism set out in

10   number three (3)?

A-   No, we did not address this criticism because, again,

this is an invalid criticism. You will note that his

estimate is just for the age group thirty-five (35) to

thirty-nine (39) and that he uses for that age range an

15   attributable risk of point three (.3) which is far too

low because the circulatory disease in particular, the

relative risk and the attributable risk is higher among

younger age groups. For example, below age fifty-five

(55) approximately sixty (60) to seventy percent (70%)

20   of all coronary heart disease is attributable to smoking

and the relative risk, attributable risk declines with

age.

So it would have been more appropriate for him to

multiply by a figure of the order of point six (.6) or

25   even point seven (.7) than point three (.3). At least

for circulatory disease.

Q- So the answer is no?

A- No for that reason.

Q- Yes, okay. So, so far we've got three (3) peer reviews.
5   One of them is not in any detail and says that the paper
ought to be available for the anti-smoking activists as
soon as possible. Two (2) of them have detailed
criticisms and you have made no adjustment in the paper
based on any of those criticisms up to this point; am I
10   correct?

A- Not quite. We did include the confidence limits as
recommended by the C.M.A.J. referee. We may have made
other changes, I don't recall.

Q- Well...

15 A- The policy of the journal is that when you get
criticisms from a referee you should either revise or
rebut. So that when we return the paper to the journal
we either make the changes the referee asks or we
explain in a covering letter why we did not make that
20   change. And then it's up to the journal editor to
decide if, in fact, we did what was appropriate.

Q- Well, in fact, if we look at the March seventeenth
(17th), nineteen eighty-seven (1987) draft that's
attached to the review, in fact the March seventeenth
25   (17th), nineteen eighty-seven (1987) draft isn't very

different from the version that was published in the

journal in nineteen eighty-eight (1988), is it?

A-   The estimates of deaths attributable would appear to be

identical.

5   Q-   Yes.

THE COURT:

What is an "E" code?

A-   E code is when diseases are being coded by hospitals,

either for hospital records or death records, they

10   assign a three (3) or four (4) digit code to identify

the cause of death. E refers to external, which in the

case of injuries is external cause of an injury. For

example, a motor vehicle accident.

Q-   By the way, now I'm addressing my question to the

15   attorneys. Will I ever be provided with the Stats Can.

printout of causes of deaths for the eighty-three ('83),

eighty-five ('85) and further on? Was that the

intention of any of the attorneys to file these?

Me CHERNIAK:

20   I must say I have not given any thought to it. I don't

know the answer to your question.

THE COURT:

It's because in many of the reports they do refer to the

mortality causes as found in Stats Can., even in Mr.

25   Wigle's report. They only have only bits of these

stats., and I was just wondering if I was going to ever
get the whole thing. Quite frankly, I would be very
interested in getting it.

Me CHERNIAK:

5   I'll certainly take that under consideration from our
side, My Lord. I just can't answer your question at the
moment.

THE COURT:

Or maybe it's not Mr. Wigle, maybe it's somebody else.
10   But I've seen it referred -- maybe it's Ferrence --
Roberta Ferrence.

Me BAKER:

Just give us a moment, My Lord, she's coming this week,
as you know.

15 THE COURT:

Yes, well, tomorrow, I believe? Wednesday. Well,
anyways, that's out of order, but I mean...

Me CHERNIAK:

Well, I mean I suppose anybody can put it in. It's --
20   Statistics Canada material would clearly be admissible,
so it wouldn't be -- there's no reason why it can't go
in.

Q-   The -- well, the -- just looking at what this reviewer
did in his criticism, he looked at the nineteen
25   eighty-five (1985) Stats. Canada causes of death and he

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took the cancer causes and the circulatory causes and he

totaled them and he compared it to all causes and he

just couldn't get to your figures.

A- No, because he...

5   Q- Or anything like your figures.

A- No, he could not because he used an invalid method.

Q- Yes. All right. And I'd be correct that if we compared

the March seventeenth (17th), nineteen eighty-seven

(1987) draft with the published version that is now

10 RJR-159, they'd be very similar, wouldn't they?

A- I assume they're very similar. I haven't compared them

line by line.

Q- And I take it that you did resubmit the article to the

-- to the journal?

15 A- Yes.

Q- And we don't have -- perhaps you do have, but we don't

have the covering letter. Do you have the covering

letter?

A- It should be in our files in Ottawa.

20 Q- Yes. All right. Now, can you tell me this. Before

there was publication in the journal, was there another

internal review of the -- of your paper within the

Department of Health?

11/0076   A- Yes, Dr. Krewski of the Environmental Health Directorate

25 was asked to review it.

Q-   And as a matter of fact, it wasn't just he that prepared

     the criticism of it. He and others, including yourself

     and Mr. Collishaw were involved in the -- in the review?

A-   Yes, Neil Collishaw and I met with Dr. Krewski because

5   he's a statistician and he didn't really understand the

     methods we were using. He's not an epidemiologist. So

     we had to explain to him what we did and why we did it.

Q-   And there was a report prepared called "Mortality

     Attributable to Cigarette Smoking in Canada - An

10   Overview of Current Risk Estimates", was there not, in

     February of nineteen eighty-eight (1988)?

A-   I don't recall a report.

Q-   Well, let's see if I can refresh your memory. RJR...

THE CLERK:

15   164.

Me CHERNIAK:

Q-   We have a covering letter -- we have a covering letter

     dated February sixteenth (16th), nineteen eighty-eight

     (1988), from Dr. Krewski to the chief of Biostatistics

20   and Computer Applications Division, Environmental Health

     Directorate, in which he says:

          "Please enclosed find a draft of the summary

          we have been asked to prepare on smoking

          mortality."

25   And he asks the chief for his comments to prepare a

final draft. And we see that among the distribution is

Dr. Wigle, and if we turn over the page we see a draft

of the report and it appears to have been prepared by

Dr. Burnett, Mr. Collishaw, Dr. Krewski, Dr. Mao and

5   yourself, Dr. Wigle. Yes?

A-   Yes.

Q-   And I want to ask you some questions about that study.

And just so we can see what it's about, look at the

introduction:

10   "In order to assess the health impact of

tobacco consumption, attempts have been made

to estimate the increase in mortality due to

cigarette smoking. The purpose of this report

is to summarize the currently available

15   estimates of tobacco mortality, evaluate their

statistical bases and describe the data

sources and assumptions underlying each

estimate. Specifically, this report

summarizes the methodology and information

20   used to estimate the number of Canadians that

die due to smoking cigarettes each year. 2

exposure variables are considered: ever

smoking during lifetime and current smoker.

The amount smoked per day or the length of

25   time of smoking are not considered. 2

response variables are considered: all causes

of death when exposure is measured as ever

smoker and death due to cancer, cardiovascular

disease and chronic obstructive lung disease

5   when exposure is measured as current smoker."

And then he -- then the report refers to:

"Collishaw et al, 1987, have estimated the

number of Canadians that died in 1985 due to

smoking."

10   And that is the very paper that we've been talking about

that was ultimately published in the Canadian Public

Health Journal, isn't it?

A-   Yes.

THE COURT:

15   So that's the AG -- RJR...

Me CHERNIAK:

RJR.

THE COURT:

... 159?

20   Me CHERNIAK:

159, yes.

THE COURT:

Okay.

Me CHERNIAK:

25   Well, yes, it's -- I think, My Lord, that the actual

nineteen eighty-seven (1987) paper would be probably the

March seventeenth (17th), nineteen eighty-seven (1987)

draft that we just looked at and the final published

version is RJR-159.

5   THE COURT:

Ah, okay. I see. It's the draft with the...

Me CHERNIAK:

Because at the time of this memo RJR-159 in its

published form would not have been in existence.

10 THE COURT:

Okay.

Me CHERNIAK:

Q- And then it refers to another study by a man named

Semenciw in also nineteen eighty-seven (1987), who

15   performed an alternate analysis in which the exposure

variable is current smoker and the response is death due

to cancer, cardiovascular disease and chronic

obstructive lung disease. Both the expected and

potential number of years of life lost due to smoking

20   are determined. Who is Semenciw?

A- Robert Semenciw is a statistician who works in our

bureau.

Q- Okay. So this was a review then of -- of two (2)

internal products, yours and Semenciw's in effect?

25   That's what this is, isn't it?

A- Yes.

Q- And in effect, you and Collishaw are in part the
    reviewers of your own work?

A- Yes, we are, but that's for the reason I explained

5   previously.

Q- Well, whether -- for whatever reason, this internal
    review was prepared by, among other things, Collishaw --
    among other people -- Collishaw and White?

A- Correct, yes.

10 Q- So apparently, you had some input into its final -- into
    the final product?

A- My input was limited pretty much to explaining
    terminology and concepts to Dr. Krewski.

Q- Now, let's look and see what it says about your work.

15 This is also a kind of peer review, isn't it?

A- It's not the type of peer review that can be held up as
    a disinterested peer review. I mean, when you have the
    authors sitting on the review board, it's not exactly
    impartial or whatever.

20 Q- Well, with those qualifications, it is still a critical
    review of your work by your colleagues within the
    department, with input from you?

A- Yes. Yes.

Q- So unlike impartial peer review, your colleagues have

25 the opportunity, when they're doing the review, to sit

around the table and ask the people who did the work

themselves why they did what they did...

A- Yes.

Q- ... to justify it?

5   A- Yes.

Q- So in some respects, it's better than impartial peer

review, in some respects it's worse? Right?

A- It's hard to say.

Q- Yes. All right.

10   A- There's problems with both approaches.

Q- Well, let's look at item three point two (3.2) on the

bottom of page four (4).

       "The relative risk of death between ever

       and never smokers ..."

15   -- and that's really what you and your colleagues were

doing; am I not correct?

A- Yes.

Q-   "The relative risk may be obtained from a

       sample of death records and a survey of

20   surviving relatives or other individuals who

       would be familiar with the deceased's smoking

       habits. This is a retrospective approach and

       is limited by the quality of data obtained

       from a relative recalling the smoking habit of

25   the deceased."

But that's what Godley did, isn't it?

A-   Yes. The main problem of the Godley approach, whereby
      people who died could not identify their smoking habits,
      had to be obtained through a relative. The main problem
5   there is misclassification of smoking status.

Q-   Yes.

A-   Which would tend to reduce the relative risk estimates.

Q-   But the problem is that it suffers from the -- from the
      fact that it's only as good as the honesty and recall of
10   the relatives surveyed, right, because the person's
      dead, so you're getting the smoking habits given to you
      in a survey, perhaps a telephone survey by some relative
      who may or may not tell the interviewer the truth, may
      or may not know the truth, and so it suffers from that
15   difficulty. That's what's being said here; correct?

A-   Yes, but the most likely effect is to underestimate the
      relative risk and the number of deaths attributable to
      tobacco...

Q-   Well, we don't know that. They may be underestimated,
20   they may be overestimated.

A-   But if the relatives randomly say yes when they should
      say no and say no when they should say yes, the effect
      would be to under estimate the relative risk. If they
      tend to say no, this person did not smoke, when in fact
25   the person did, that would also tend to underestimate

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the relative risk, because you would have smokers lumped

in with so-called non-smokers.

Q-   At any rate, the report goes on to say:

"Recall bias may not be substantial for the

5   presence or absence of current smoking of the

deceased. However, if the deceased does not

currently smoke, but smoked in the past,

misclassification of exposure may be greater.

This approach was utilized by Collishaw et al

10   ..."

-- in the paper we're talking about --

"... to estimate mortality due to smoking in

Canada."

And then it goes on to indicate what you did. So this

15   confirms that you employed the Godley data from nineteen

seventy-four (1974) which consisted of a sample of

twenty thousand (20,000) death records from the United

States where surviving family members were asked by mail

questionnaire to provide information on the deceased's

20   smoking habits. And a relative risk for male smokers at

various age levels was determined. So that's the Godley

approach that you and your colleagues utilized?

A-   Yes.

Q-   Yes, okay.   And then the second approach is the

25   approach that was also used for the second assumption in

your Table 2, was the -- outlined as the interviewing of

subjects concerning their smoking habits and following

them until death, which is the prospective method?

A- Yes.

5 Q- And that's the method that was used in the Nutrition

Canada survey between nineteen seventy (1970) and

nineteen seventy-two (1972)? Yes?

A- Yes.

Q- And that's what Johansen did to come up with the

10 relative risk for Canadians?

A- Yes.

Q- And there's a criticism there at the top of page six

(6):

"*However, the 862 deaths observed in the 10*

15 *year follow-up period were too few to permit*

separate estimation of relative risk by 5 year

age groups. Since these risks vary by age and

sex, the use of Nutrition Canada survey is

limited. Notwithstanding ..."

20 But that is the relative risk that you used in the first

method in your paper; am I correct?

A- Yes, this criticism is hard to interpret because the

relative risk estimates from the Nutrition Canada survey

were age adjusted. The -- it seems very likely that

25 even if we could have the Nutrition Canada relative risk

broken down by age, that it would make any material

difference in the risk estimate, because we've already

adjusted for age in calculating the relative risk.

Q- Well, whatever, it's a criticism and in part it's your

5   criticism. You're in part responsible for this report?

A- In part, but...

Q- Yes.

A- ... reports written by committees tend to not be

exclusively your own views.

10 Q- Now, then it goes on to outline the population

attributable risk that you and Collishaw used in the --

in the nineteen eighty-seven (1987) article, and it

says:

> "Combining the relative risk for ever smokers

15   from Godley 1974 and the proportion of

> Canadians that are ever smokers from the

> general social survey of 1985 ..."

-- Collishaw and you estimated the age adjusted

population attributable risk to -- for males and females

20   as point three four nine (.349) and point two one three

(.213) respectively, which in this draft says:

> "This suggests that 34.9 of all deaths among

> males and 24.3 among females are due to

> smoking."

25   There must be a misprint there. I think it means

twenty-one point three (21.3), doesn't it?

A- Yes, it should include the age range thirty-five (35) to
   eighty-four (84).

13/0046   Q- Yes. And those were the figures that -- that were

5   actually used in your paper, a combination of the -- of
              Godley's relative risk and the -- and the proportion of
              Canadians that are ever smokers?

A- Yes.

Q- That's how you get to that number?

10 A- Yes.

Q- So that number of thirty-four point nine percent (34.9%)
   or twenty-one point three percent (21.3%) is only as
   good as the combination of -- is only as good as
   Godley's figures on the one hand and it's only as

15   helpful as knowing that -- what the total is of ever
           smokers. In Canada, taking into account that ever
           smokers includes everybody who's ever smoked a hundred
           (100) cigarettes or more, right?

A- Well, in our study, the method one (1) definition would

20   be three hundred and sixty-five (365) cigarettes or
           more.

Q- All right. Any rate, if Godley's figures are either in
   error or not applicable to Canadians, then that affects
   the usefulness of the -- that affects the validity of

25   the thirty-four point nine percent (34.9%)? Yes?

A- Which is the thirty-four point nine percent (34.9%)?

Q- Thirty-four point nine percent (34.9%) is, as I
understand it, a combination of using Godley's relative
risk and the proportion of Canadians that were ever
5   smokers, for each age group.

A- No, there seems to be an error, because the -- oh, just
a minute...

Q- That's what it says: combining the relative risk for
smokers from Godley and the proportion of Canadians that
10   are ever smokers equals the age adjusted population
attributable risk. That's what you did in your paper,
isn't it?

A- It would appear that this section of this report that
we're discussing has at least two (2) errors. The
15   authors -- this committee seems to have mixed up the two
(2) methods. The point three four nine (.349) should be
point three nine four (.394). So those figures, point
three nine four (.394) and point two one three (.213)
come from method one (1) which is the Nutrition Canada
20   method and then the mistake is replicated in the next
sentence. It should be thirty-nine point four percent
(39.4%) of all deaths among males. And then there is a
new mistake. Twenty-four point three (24.3) should be
twenty-one point three percent (21.3%) among females.
25   So this paragraph is quite misleading.

Q-   All right, let's move on. Let's go on to page eight (8)

     where there is a review of the number of deaths due to

     specific causes for current smokers, and it just deals

     with Semenciw's estimate of the impact of smoking on

5   Canadians for certain specific diseases: cancer,

     cardiovascular disease and chronic obstructive lung

     disease. And those three (3) comprise the largest

     percentage of what would be total deaths from smoking.

     Am I not right?

10   A-   Yes.

Q-   That would be the overwhelming percentage...

A-   Yes.

Q-   ... if you just take those three (3). The other causes

     would be... there'd be some but very few.

15   A-   Um...

Q-   Yes?

A-   Well, I don't know the exact figure but I would think

     that those three (3) causes would account for the large

     majority of smoking-related deaths.

20   Q-   Okay. And it says:

          "... but Semenciw, in 1987, estimates that on

          the average 26,500 Canadian current smokers

          die per year from one of the 3 causes.

          Assessment was not determined separately by 5

25   year age category."

AUDIOTRANSCRIPT, Division de Pierre Vilaire & Associés Ltee

Then the review goes on to say why that figure is

different than yours. And it says there are three (3)

reasons:

"First Collishaw et al consider all causes of

5   death where Semenciw considers only 3 causes.

Second, Collishaw et al employ ever smoking as

the measure of exposure, with appropriate

estimates of relative risk, ever versus never

smoker. Semenciw, however, uses current

10   smoker as an estimate of exposure, thus

yielding a much smaller estimate.

Third, the estimate of Semenciw was not

age adjusted. Since the relative risk due to

smoking decreased somewhat with age and death

15   rates increased with age, the unadjusted

estimates overestimate the total number of

deaths due to smoking."

So what they're saying is Semenciw, for that reason,

overestimates the number of deaths because it's not age

20   adjusted.

"If the data from Collishaw are re-analyzed,

adjusting for age, and considering only

current smokers, then the estimated number of

deaths for 1985 is reduced from (35,131) ..."

25   -- which is the figure in your paper --

"... to 21,303. Thus the estimate of the

Semenciw is reduced from 26,000 to 21,303

simply due to the age adjustment.

So what they're pointing out is that if you change

5 your category to current smokers from ever smokers, the

number goes down by about forty -- about -- it goes down

about -- well, from twenty-one thousand (21,000) -- from

thirty-five thousand (35,000) to twenty-one thousand

(21,000), and about forty percent (40%). That's

10 correct; isn't it?

A- No.

Q- Thirty-five (35) -- if you reduce thirty-five thousand

one thirty-one (35,131) to twenty-one thousand three o

three (21,303), I suggest to you the reduction is about

15 forty percent (40%). We can figure it out exactly, but

forty percent (40%) of thirty-five thousand (35,000) is

fourteen thousand four hundred (14,400).

A- It may be true that twenty-one thousand (21,000) is

forty percent (40%) lower than thirty-five thousand

20 (35,000), but the statement that this reflects just the

difference between current smokers and ever smokers is

not true.

Q- Well, I mean that's what it says.

Me BAKER:

25 Let him finish the answer.

A-   The estimate of thirty-five thousand (35,000) includes

current and ex-smokers. It was age adjusted. The

method one (1) and method two (2). Semenciw's estimate

of twenty-six thousand (26,000) is based on a totally

5   different method. It's for current smokers only and

it's using the U.S. Surgeon General attributable risk

figures of thirty percent (30%) of cancer deaths.

Thirty percent (30%) of cardiovascular -- that should be

coronary heart disease, by the way -- and eight-five

10   percent (85%) of chronic obstructive lung disease, so

that we get from thirty-five thousand (35,000) to

something like twenty-six thousand (26,000) using a

different method for current smokers. To get down to

twenty-one thousand (21,000) we go back to Collishaw et

15   al method two (2) and we -- and we restrict it to

current smokers.

Q-   Yes.

A-   But we're mixing apples and oranges there and it's not

at all clear that you go from thirty-five thousand

20   (35,000) to twenty-one thousand (21,000) just by doing A

and B.

Q-   Well...

THE COURT:

Are you saying that the attributable risks found in the

25   U.S. Surgeon General's report of eighty-two ('82) are

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incorrect?

A- No, I'm just saying that say you go from thirty-five

thousand (35,000) to twenty-one thousand (21,000) by

adjusting simply for ...

5 Q- No, but you say you have two (2) methods. He's using

the attributable risk of thirty percent (30%) which he

found in the Surgeon General's report of eighty-two

('82) and based on his current smokers. Of course, if

you take only the current smokers, you'll have a

10 different figure and that's something else than ever

smoked and current smokers, we all agree. But he puts

up a factor which is the calculation of attributable

risk found by the Surgeon General and gets the figure.

The rest is mathematics. Are you saying that the

15 figures used in the Surgeon General's report are

incorrect?

A- No.

Q- Because that's basically it.

A- No.

20 Q- Your relative risk is different from the Surgeon

General's risk, is it not?

A- Our attributable risk is for all causes of death

combined. Your Surgeon General's is broken down for the

three (3) main diseases.

25 Q- Yes, but your relative risk for all causes has to be a

combination of all causes.

A- Yes.

Q- It's a mean -- it's an average of all causes?

A- Yes. Exactly. But we can't say for sure that our

5   summary of relative risk describes all diseases. It

means that the Canadian data exactly supports the U.S.

Surgeon General's estimates. To get at that we, for

example, for cancer you have to go back to Dr. Miller's

report where he estimated for nineteen eighty-seven

10   (1987) smoking attributed or was responsible for

twenty-nine percent (29%) of cancer deaths, which is

close to the U.S. Surgeon General, and for

cardiovascular disease, we have to go back to the

Nutrition Canada cardiovascular disease report, which is

15   in the annex, and there we estimated that for men aged

thirty-five (35) to seventy-nine (79), forty-six (46) or

seven percent (47%) of cardiovascular deaths were

attributable to smoking, and for women about ten percent

(10%), which would be consistent with an overall risk of

20   about thirty percent (30%) for men and women.

But the problem I was having with this section of

the report is that by excluding ex-smokers, and by using

a different methods, Semenciw arrives at the figure of

twenty-six thousand (26,000), but the last sentence

25   states that the estimate of Semenciw is reduced to

twenty-one thousand (21,000) simply due to age

adjustment. Well, that's simply false.

The estimate of Semenciw already -- which is based

on the U.S. Surgeon General attributable risk already

5   allows for the fact that if you take all of the deaths,

all of the cancer deaths over the age range thirty-five

(35) to seventy-nine (79), or whatever Semenciw used,

that the average attributable risk for smoking would be

about thirty percent (30%).

10   This last statement is referring -- it's reaching

-- well, it's just not true. It doesn't make sense.

Me CHERNIAK:

Q-   Now, when you talk about the percentage of deaths that

are related to cancer, we have to use that in the sense

15   that we talked about yesterday, that the total of all

those percentages doesn't necessarily have to equal a

hundred percent (100%). It can be more than a hundred

percent (100%) as Rothman pointed out yesterday; isn't

that so?

20 A- Yes, the total can be more than a hundred percent (100%)

if you don't allow for interactions. The -- we have in

the report on cardiovascular deaths in the Nutrition

Canada Cohort, we address that point, and using the

method of Walter, which allows for interactions in

25   calculating attributable risk, we show that the combined

effect of smoking, high cholesterol and high blood

pressure is less than the simple added relative risk or

attributable risk.

Q- At any rate, looking at this internal review of your

5   paper and Semenciw's paper, it is -- that you

participated in -- it says:

"If the data from Collishaw are re-analyzed

adjusting for age and considering only current

smokers, the estimated number of deaths for

10   nineteen 1985 goes from the figure that's in

the report of 35,131 ..."

-- that was also in the published version --

"... to 21,303."

That's what this says, yes? Have I read it right?

15 A- Yes, you've read it right, yes.

Q- Thank you.

A- Yes.

Q- Now -- and even that twenty-one thousand three o three

(21,303) figure would still be -- would still include

20   people who had died up until age eighty-five (85)

wouldn't it, because that's what your figures do?

A- Yes.

Q- So to the extent that some fifty percent (50%) of those

deaths are from people aged seventy (70) to eighty-five

25   (85), then if we use -- if we try to determine what the

number of current smokers who died from smoking-related

deaths are seventy (70) and under using the rationale

for doing so in the earlier departmental report that we

talked about earlier today, you'd probably have to

5   change that number from twenty-one thousand three o

three (21,303) to about eleven thousand (11,000) because

about fifty percent (50%) of the deaths would be people

over seventy (70), right?

A-   It would depend on the distribution by age of current

10   and ex-smokers. If, for example...

Q-   But that wasn't done?

A-   If you're excluding ex-smokers, then they would tend

perhaps to be -- whatever, younger or older.

Q-   Yes.

15   A-   It would make your extrapolation a little shaky.

Q-   Well, whatever, it wasn't done. There would be some --

there would be a significant reduction whether it's

fifty percent (50%), sixty percent (60%) or forty

percent (40%), we don't know, it wasn't done but it

20   wouldn't be twenty-one thousand three o three (21,303),

it would be a lot less, right?

A-   Yes, if you exclude the deaths attributable to people

who smoked in the past but who have since quit. It

would appear -- you would probably drop the attributable

25   deaths by at least twenty-five percent (25%).

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Q- Yes. All right, and then -- then the next heading in
this internal review is limitations on the analysis
performed.

"A major limitation on the estimate of deaths

5   attributable to smoking in Canada is the
reliability of the information on whether an
individual has ever smoked, as provided by
Godley. Although no such bias, what we call
bias exists with the data from Nutrition

10   Canada survey, the sample size was such that
it did not allow estimation of relative risk
by 5 year age categories."

It just repeats the two (2) criticisms that we talked
about earlier: the limitation on the reliability of the

15   Godley survey and the small sample size of the Nutrition
Canada in the nineteen seventy (1970) survey.

"It is desirable to have data on smoking
habits from live subjects and a large enough
sample size to determine age, sex, specific

20   relative risks."

In other words, what the reviewers are saying: we're not
sure that the Godley's survey is a very good survey and
we know that the Nutrition Canada survey wasn't big
enough. That's a paraphrase of that paragraph, isn't

25   it?

A—   Yes, but again, they seem -- this report written by a

committee seems to be not totally accurate in terms of

portraying what the strengths and weaknesses of our

study were. For example, the implication of -- of the

5   statement about the Nutrition Canada survey that the

sample size was not -- did not allow estimates of

relative risk by five (5) year age group, implies that

that's a major weakness. In fact, the relative risk was

adjusted for age. The -- if we had the relative risks

10   available by five (5) year age group, there would very

likely have been very little change in the risk

estimates.

Q—   And then -- of course, this is a review that, as we

know, you participated in.

15   "A further limitation of the analysis is the

lack of adjustment for confounding factors.

These are factors that are both related to

mortality and unevenly distributed among ever

and never smokers. These confounders may

20   increase or decrease the relative risk of

death due to smoking and thus alter the

estimated number of deaths attributable to

ever smoking."

Now, confounding, as we've heard from many

25   epidemiologists, is a major limitation -- or the danger

of confounding is a major limitation on epidemiological

research, isn't it?

A-   The...

Q-   Is it or not, that's the question?

5 A-   The answer is neither yes or no. The answer can only be

yes when it occurs in a substantive way. If the concern

about confounding or bias is -- is large among

epidemiologists, we're always looking for confounding or

bias to explain data, but in fact, this paragraph, this

10   last paragraph is -- is misleading at it stands. It

says that:

"A further limitation of the analysis is the

lack of adjustment for confounding factors."

Well, that's not true. It only applies to method two

15   (2), which is the Godley method. As I stated earlier,

the Nutrition Canada method, or method one (1), the

relative risk for smoking was adjusted for the major

confounders which were hypertension and diabetes,

cholesterol was not a confounder. Furthermore, a great

20   deal of research has been summarized by the U.S. Surgeon

General in his nineteen eighty-nine (1989) report

indicating that much effort has gone into explaining the

tobacco relative risk based on confounders, and when

adjustments are done, very little change occurs in the

25   relative risk estimates for smoking-related diseases.

Me CHERNIAK:

Well, My Lord, the only question I asked him was whether

confounding is something that is relevant to

epidemiological research.

5   THE COURT:

He answered -- in so many words, but he did.

Me CHERNIAK:

Q- So, your colleagues and a committee that you and

Collishaw sat on referred to a limitation on in part

10   your work, is the lack of adjustment for confounding

factors which may increase or decrease the relative risk

and that are related to mortality and unevenly

distributed among ever and never smokers. Whether you

agree with it or not, that was the criticism of your

15   peers, wasn't it?

A- Well, yes it was, yes.

Q- Yes.

A- In this report.

Q- In this report; and that reference to the lack of

20   adjustment for confounding factors both related to

mortality and unevenly distributed among ever and never

smokers, that is very much the same criticism that the

reviewer for the Canadian Medical Association Journal

made, isn't it? He didn't put it in quite that way but

25   that's what he meant?

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A-   Yes, but again I would have to qualify my answer by
      saying that the referees don't always read reports too
      carefully ...

Q-   Right.

5   A-   ...and in both cases they were wrong.

Q-   It -- but is that the criticism that that peer reviewer,
      independent peer reviewer made, the same kind of
      criticism, yes?

A-   Yes.

10   Q-   And is that the same kind of criticism, again expressed
      a little differently, that the negative reviewer for the
      Canadian Public Health Journal made? He approached it
      from a different point of view but he said there's
      something wrong with those figures?

15   A-   Yes.

Q-   Yes.

A-   It is what I said earlier.

Q-   And would I be correct, sir, that none of these
      criticisms -- either this internal review that we've
20   just gone over or the two (2) external ones -- caused
      you or Collishaw to change anything or refer to any of
      these criticisms in the article that got published that
      we now have as RJR-159, correct -- yes?

A-   To answer your question, I have to repeat some of what I
25   said before.

Q- Why can't you just say yes or no? Did you make any
changes between February, nineteen eighty-eight (1988),
and the time that the article was published in -- in --
what's the date? I misplaced my 159.

5 THE COURT:
May, June, nineteen eighty-eight (1988).

Me CHERNIAK:

Q- May, June, nineteen eighty-eight (1988), yes, based on
any of these criticisms -- or even referred to them?

10 A- The paper that was published included the changes that
we did make and the covering letter included the reasons
for not making other changes. The -- the major change
we did make was to add the confidence intervals. The
major change we did not make was to adjust again for

15 confounders that we'd already adjusted for in method one
(1) and which could not be adjusted in method two (2)
because the information wasn't available.

Q- So -- so much for peer review. It really didn't cause
you to change anything from the time that you prepared

20 the article in nineteen eighty-six (1986), which as we
know, increased the deaths to thirty-three thousand
(33,000) in nineteen eighty-three (1983) to -- from the
twenty-six thousand (26,000) or twenty-four thousand
(24,000) figure earlier, but really none of the figures

25 changed from the time peer review started in nineteen

eighty-six (1986) until you published in nineteen

eighty-eight (1988), although you had significant

criticism both internally and externally, nothing

changed, did it?

5   A-   Okay, nothing changed materially, yes -- or no, we did

not make major changes. We added the confidence

intervals and we did not accept the invalid criticisms

about failure to adjust for confounders because we'd

already done that in method one (1).

10 Q-   Yes. Okay, just so long as we understand the

intellectual rigour that went behind the publication in

the Canadian Public Health Journal.

Me EVRAIRE:

Is that a question?

15 THE COURT:

Okay, we will adjourn for lunch. Monsieur le greffier,

avez-vous tous les rapports qui ont déjà été produits,

déjà été cotés? Tous les rapports d'experts.

LE GREFFIER:

20 Les rapports?

THE COURT:

Je vais les amener à mon bureau. Vouliez-vous dire

quelque chose, maître Joyal?

Me JOYAL:

25 Oui, toujours. L'invitation. Le rapport de Roberta

Ferrence, en annexe, énumère à la page quarante-neuf (49), je pense que c'est six (6) études de Statistique Canada. Je sais pas si c'est celle-là que vous aviez en tête lorsque vous avez parlé...

5   THE COURT:

Sur les causes de la mort, oui, puis qui me liste seulement que des extraits qui sont tirés de ces...

Me JOYAL:

Alors je vais vérifier, parce que dans les annexes aux

10   références, on devrait retrouver ces documents-là, mais je vais m'en assurer.

THE COURT:

Je ne vous oblige pas. Je vous demande...

Me JOYAL:

15   Non non. Non non, Monsieur le Juge.

THE COURT:

... en vous disant que je détesterais pas ça du tout, les avoir. C'est vous qui faites votre preuve.

20   LUNCH ADJOURNMENT

In the year of Our Lord nineteen hundred and ninety (1990),

on this thirteenth (13th) day of the month of March,

PERSONALLY CAME AND APPEARED:

5   Me CHERNIAK:

        Earl Cherniak for RJR-Macdonald.

    Me POTTER:

        And for Imperial, Simon Potter.

    Me EVRAIRE:

10   For the Attorney General, Paul Evraire.

In the year of Our Lord nineteen hundred and ninety (1990),
on this thirteenth (13th) day of the month of March,

PERSONALLY CAME AND APPEARED:

5   DONALD T. WIGLE,

WHO, having previously made a solemn declaration, doth depose
and say as follows:

10 CROSS-EXAMINATION BY Me EARL A. CHERNIAK (CONTD),

On behalf of Petitioner, RJR-Macdonald Inc.:

Q- Dr. Wigle, this nineteen eighty-eight (1988) article in
    the Canadian Journal of Public Health that was
    ultimately published following the peer review process
15 that we discussed this morning was, as I understand it,
    the first Canadian study to try to put a number to
    mortality attributable to tobacco use in Canada, am I
    correct?

A- I think it was the first such effort in a peer review
20 journal, yes.

Q- Yes. Because you do not refer to any other studies on
    the same topic in your references in the article?

A- That's correct, yes.

Q- And prior to that time, would I be correct, was that --
25 would I be correct that the rule of thumb that was used

in Canada was since, by some process, in the United

States someone had estimated that there were three

hundred and fifty thousand (350,000) annual deaths by

tobacco use, people had done the extrapolation for

5   Canada by saying: well, we have about ten percent (10%)

of the population and therefore the number for Canada

must be thirty-five thousand (35,000)? That's what, in

fact, had been done up to that time, isn't that so?

17/0111   A-   No, not to the best of my knowledge.

10   Q-   You've never heard of such a figure being used for

Canada, thirty-five thousand (35,000) annual deaths, ten

percent (10%) of the United States rate?

A-   Not by our department.

Q-   I didn't suggest it was by your department. I suggested

15   by persons who were trying to put a figure in for

Canada, the Non-Smokers Rights Association for one, or

groups, activist groups like that that wanted to have a

number for Canada. They would simply took -- they

simply took ten percent (10%) of the American figure,

20   isn't that so?

A-   Actually I don't recall that being done, but it might

have been.

Q-   You've never heard the figure thirty-five thousand

(35,000) deaths per annum used in Canada by the Canadian

25   Cancer Society, the Non-Smokers Rights Association, any

of those groups? Never were aware of that figure being
used?

A-   Not citing ten percent (10%) of the United States.

Q-   Well, whether they cited it or not, had you never heard

5   the thirty-five thousand (35,000) per annum figure
before?

A-   Before we did our paper?

Q-   Yes, before you did your paper.

A-   Um -- not to the best of my knowledge.

10   Q-   I see. At any rate, certainly if your paper had used
the -- had used the -- used current smokers rather than
-- rather than ever smokers, the number wouldn't have
been thirty-five thousand (35,000), would it?

A-   No, it would have been something less.

15   Q-   Yes; and if your paper would have excluded people over
seventy (70), it wouldn't have been thirty-five thousand
(35,000), it would have been fifty percent (50%) of that
figure, wouldn't it?

A-   Approximately, yes.

20   Q-   Yes. And if your paper would have used the original
method used by Collishaw and Tostowaryk in the -- for
the nineteen eighty-two (1982) estimates, it would have
been something less because they only came up with
twenty-four thousand (24,000) annual deaths, not

25   thirty-five thousand (35,000), using the Godley method?

Right?

A- Well, I'm not aware that that method was applied

correctly in that paper. So, if we had done it

correctly, we could have come up with a different

5   number.

Q- So, in fact, if you would have applied some of the --

the method -- if you would have taken into account some

of the criticisms in the peer reviews of your paper, the

number wouldn't have been thirty-five thousand (35,000),

10   it would have been something less, isn't that so?

A- That's not at all clear. The -- we did address the

issue of confounding in method one (1). The -- the fact

that we used an estimate for a wide age range rather

than for five (5) year age groups could have changed the

15   estimate somewhat but probably not in a material way.

Q- And you were aware, of course, as the peer reviewer for

the Canadian Public Health Journal who so roundly

praised or so fulsomely praised your article, you were

aware that this article would, in fact, be used by

20   anti-tobacco activists to widely publicize the number of

the Canadian mortality?

A- Yes.

Q- Wouldn't you?

A- Yes.

25 Q- And you did not feel it appropriate to make mention of

the various limitations and criticisms of your article

that we've referred to this morning anywhere in your

article, did you?

A-   We do address some of the limitations of the paper in

5   the discussion.

Q-   Well, I guess we can read that for ourselves. All

     right, those are my questions, thank you.

THE COURT:

     Mr. Potter.

10 Me POTTER:

     Thank you, My Lord.

CROSS-EXAMINATION BY Me POTTER,

On behalf of Petitioner, Imperial Tobacco Limited:

15 Q-   Dr. Wigle, I just want to give you a chance to clear up

     a few things which came up this morning before I move

     into the questions that I have ready for you. First of

     all, I understand from what you've said that this

     article, RJR-159, and going through its various

20   incarnations and through its various peer reviews, you

     made one (1) substantive change to it and that was to

     add the confidence levels before it was published, is

     that correct?

A-   That's the main revision that I recall, yes.

25 Q-   And that was the main revision you made after reading

all the comments of the referees and the peer critics?

A- Yes, because as I explained previously, the -- when we
are faced with referees' comments, we either revise or
rebut, and the most substantive criticism was the

5   failure to adjust for confounding which somehow seems to
have escaped at least two (2) of the reviewers.

Q- Anyway, that was one (1) criticism you decided was
correct, of all the ones -- you decided lots of the
criticisms were incorrect but the one you decided was

10   correct was the failure to mention confidence levels?

A- Well, there's -- we had different reasons for reacting
or not reacting to different criticisms. For example,
the appropriateness of using "old" U.S. relative risk
estimates in a -- in a Canadian population in the

15   nineteen eighties (1980s). We could not fully address
that because we did not have a better data set at that
time. Now, we would have the American Cancer Society
Cancer Prevention Study too, which would be more
appropriate.

20 Q- Dr. Wigle, did you decide that the criticism addressed
to you on the question of disclosure of confidence
limits was well founded or ill-founded?

A- Confidence limits are -- are usually highly desirable in
an epidemiology study.

25 Q- So -- so you decided to make that one (1) substantive

change before it went to publication, you put in the

confidence limits, is that correct?

A-   Yes, we made all the changes that we could.

Q-   Yes; and am I correct that between that article and your

5   expert's report, that's the one (1) substantive change

between the article and the expert's report, that the

confidence limits came out?

A-   To the best of my recollection. I haven't sat down and

compared the latest draft with what was published.

10   Q-   Yes. Now, in exhibit RJR-164 -- and just so that you

know where we are, Dr. Wigle, it's the Krewski memo of

February eighty-eight ('88) in which you participated in

the way that you described. You gave some corrections

to some numbers on page six (6)?

15   A-   Yes.

Q-   And I just want to make sure that I understand you

correctly. At the bottom of page six (6), you suggested

that the number which appears there of thirty-four point

nine percent (34.9%) should more correctly read

20   thirty-nine point four percent (39.4%), is that correct?

A-   Yes, it's a -- if we look at either that reference,

nineteen eighty-seven (1987) Collishaw or the version

that was published, which I think is RJR-159, you would

see in Table one (1), under "Men," that the population

25   attributable risk is point three nine four (.394), not

point three four nine (.349) and for women it's point
two one three (.213), but it's accidentally placed under
the total column in the published version.

And then the next sentence repeats the error for
men and makes a new error for women.

Q- So, in that one sentence, we have two (2) errors in
transcription of percentages?

A- Yes.

Q- Yes. Now, Doctor Wigle, are you saying that you believe
that thirty-nine point four percent (39.4%) of all
deaths among males are due to smoking?

A- That are due to having ever smoked, either currently or
in the past.

Q- Forty percent (40%) of all male deaths are due to having
smoked?

A- In the age range thirty-five (35) to seventy-nine (79).

Q- You believe that yourself?

A- Yes.

Q- Forty percent (40%)?

A- Yes.

THE COURT:

Thirty-five (35) to?

A- Seventy-nine (79).

Q- Seventy-nine (79).

Me POTTER:

Q-   Now, you've done the calculation for the excess

      mortality of people who do smoke and of people who have

      smoked. Haven't you also done some calculations of

5   excess mortality among people who have never smoked at

      all, but who have simply been exposed to smoke?

A-   Yes.

Q-   And you've actually calculated, using the statistical

      methods you've explained, the number of Canadians who

10   die every year from lung cancer, not from smoking, but

      from having simply been exposed to it?

A-   Yes, we published a paper on that topic.

Q-   And how many did you calculate died from lung cancer

      simply from being exposed to tobacco smoke?

15 A- We prepared two (2) estimates. One was based on

      epidemiology studies, case control studies of lung

      cancer, primarily among women who had never smoked but

      were married to smokers. And using that approach, we

      estimated that about sixty (60) lung cancer deaths occur

20   annually in Canada among women or men who are exposed to

      tobacco smoke in the home, but who do not smoke

      themselves.

THE COURT:

      Sixty (60)?

25 A- About sixty (60). Six zero (60)

Me POTTER:

Q-   Sixty (60) deaths. Six o (60) deaths?

A-   Yes.

Q-   Now, I want to be sure I understand you there, Dr.

5   Wigle. Did you conclude in that work that sixty (60)

     deaths occurred in non-smoking spouses.

A-   Sixty (60) lung cancer deaths.

Q-   I'm sorry. Sixty (60) lung cancer deaths occurred in

     non-smoking spouses married to smoking spouses?

10   A-   Yes.

Q-   Or did you conclude that they actually died from lung

     cancer because they happened to be married to a smoking

     spouse?

A-   The latter, yes.

15   Q-   The latter. So you calculated, using your statistical

     methods, that there were sixty (60) people in Canada who

     died from lung cancer because they were simply exposed

     to tobacco smoke?

A-   From their spouse, yes.

20   Q-   From the spouse. Now, that sounds like a very

     manageable number, sixty (60), we're not talking about

     thirty-five thousand (35,000) anymore, Dr. Wigle, at

     sixty (60) people. It seems to me you should almost be

     able to give us names and addresses of these people.

25   Can you identify them at all?

A-   We know where to look for them. We can't identify them

on an individual basis. We would look among --

primarily among women who have never smoked but who are

married or have been married to a smoker. And that's

5   about as far as you could go. Within that group some

could have been due to passive smoking and some would be

due to other factors, including radon, for example.

Q-   Right. Or maybe other factors as well?

A-   Yes, there could be other causes that we don't know

10   anything about.

Q-   What I'm trying to get at, Dr. Wigle, and you can help

me out here by just being direct about it, that number

of sixty (60) is the result of a statistical exercise,

is it not? You're not talking about actual real people,

15   you're talking about an extrapolation from large numbers

down to that small number?

A-   Well, to the extent that we were correct in our

estimate, they were real people, but we cannot identify

which of the never smoking women had their lung cancer

20   caused by their husbands smoking and which had it caused

by something else or even an interaction between more

than one factor.

Q-   And when you say to the extent that we were correct in

our estimates, I think I'm correct in saying that this

25   statistical exercise requires the use of certain

assumptions. For example, level of risk, level of

exposure. It requires you to assume various things in

making your statistical exercise, doesn't it?

A-   Yes, there were several key assumptions.

5   Q-   And making those key assumptions, you calculated that

there were sixty (60) people who died in Canada in one

(1) year.

A-   Yes.

Q-   Because of exposure to someone else's tobacco smoke?

10   A-   Yes.

Q-   And isn't it -- am I right in saying that when we --

even calculating the thirty-five thousand (35,000),

don't you get to the same -- isn't the conclusion the

same. It's a stat -- it's a statistical exercise based

15   on the correctness of various assumptions that you make?

A-   Certainly it is a statistical exercise, but outside of

mathematics, virtually everything we know in science is

based on statistics. The first and foremost, we have to

look at causal relationships and then estimate the

20   impact of a given factor on disease. This inevitably

requires a statistical process, but it's not done in

isolation from other evidence.

Q-   That wasn't my question. You've come to the figure of

thirty-five thousand (35,000) by a statistical exercise?

25   A-   Yes.

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Q- And that statistical exercise required you to make several assumptions?

A- Yes. It's the whole basis of science to make assumptions and inferences.

5 Q- There was some mention of water yesterday and of chlorinated water being mutagenic. Do you drink tap water, Dr. Wigle?

A- Yes.

Q- Yes. Because you consider it's not that dangerous, when

10 you get down to it?

A- Actually, we recently purchased a water purifier.

THE COURT:

Q- Is that carcinogenic or mutagenic that you said?

Me POTTER:

15 I meant to say mutagenic. If I said...

THE COURT:

Q- Yesterday, did you say mutagenic or carcinogenic?

A- It's definitely mutagenic after chlorination and it may be carcinogenic because at least one (1) large case

20 control study of bladder cancer is showing that people who drink chlorinated water supplies for forty (40) or more years have an increased risk of bladder cancer, but it's not known that all the mutagens cause cancer.

Me POTTER:

25 Q- All right. The fact that it is mutagenic does not mean

that it is necessarily carcinogenic?

A-   No, it's a warning that there may be a danger.

Q-   Okay. Now, besides that, the mutagenicity of tap water
     which has been chlorinated, there are various other
5   elements in tap water which have been called dangerous
     by various people, aren't there, Dr. Wigle?

20/0072 A-   Yes, some people still think that fluoride is bad for
     your health.

Q-   Yes, we're not talking about just fluoride. Are you
10   aware that in the tap water of Toronto there is
     bromodichloromethane?

A-   That's a product of chlorination, yes.

Q-   And is that a product that you don't want too much of?

A-   Certainly.

15   Q-   M'hm. And what about dibromochloromethane?

A-   Similarly, it's another product of chlorination.

Q-   What about barium?

A-   Barium is not very toxic.

Q-   No? You can take a lot of that and not worry?

20   A-   I could take some.

Q-   Chloroform, is that in Toronto tap water?

A-   Yes.

Q-   And would you like to take too much of that?

A-   We actually have guidelines for the level of chloroform
25   in drinking waters. It wouldn't be wise to take more

than the guideline.

Q- What about chloride?

A- Chloride is quite harmless, except at massive doses.

Q- Nitrate and nitrite?

5 A- Nitrite can react in the body and form nitrosamines and it can be harmful to young babies.

Q- In fact, isn't -- don't many people believe that tobacco does exactly that?

A- Well, tobacco smoke does contain nitrosamines, including

10 some of the most powerful cancer-causing agents known and nitrosamine or nicotine, for example, which is present in tobacco smoke, causes cancer in every species that it's been tested in.

Q- And nitrite and nitrate are in Toronto tap water, aren't

15 they?

A- Yes, but we're talking about differences in dose and potency.

Q- Well, that's where I'm going to get eventually. There is strontium as well, isn't there, in Toronto tap water?

20 A- Probably. I don't know.

Q- You don't want too much of that, do you?

A- Not a lot, no.

Q- No. In fact, there are several things in Toronto tap water which, depending on their -- the level of their

25 presence in the water and the number of times we go to

the tap for another glass, may or may not be dangerous

for us, isn't that right?

A- Yes, but we have guidelines for many of them and the

guidelines are designed to protect the public health.

5   Q- What you're saying is it's a question of dosage?

A- Yes.

Q- Yes. Okay. Well, let's come back to your mortality

figures in RJR-159. I don't want to spend too much time

on this because we have already done it, but I'm looking

10   at Table 2 and I recognize, Dr. Wigle, that you've been

referring to Table 1 as yours and Table 2 as Mr.

Collishaw's, but do you feel comfortable answering

questions about Table 2?

A- Certainly.

15   Q- Yes. I've looked at something because I was puzzled

about the fifty percent (50%) which were aged seventy

(70) or over and I've calculated the increase from

nineteen eighty-three (1983) to nineteen eighty-five

(1985) and I find that if we look at the bottom of total

20   number of deaths, we can see total number of deaths went

from one twenty-nine thousand four hundred (129,400) to

one thirty-three thousand five forty-three (133,543).

That's an additional number of total deaths of four

thousand one hundred and forty-eight (4,148). Are you

25   with me?

A-   Yes.

THE COURT:

      Four thousand...

Me POTTER:

5   ... one forty-eight.

Q-   I then looked at the increase in the deaths attributable
      to tobacco and calculate one thousand five hundred and
      twenty-eight (1,528). Is that about right?

A-   Yes.

10   Q-   Well, right away I stop there, Dr. Wigle, because that's
      thirty-six point eight four percent (36.84%).

THE COURT:

      How much percent did you say?

Me POTTER:

15   Thirty-six point eight four percent (36.84%).

THE COURT:

      No, where were you? You said there were four thousand
      (4,000) new deaths.

Me POTTER:

20   Of which the tobacco deaths are one...

THE COURT:

      Well, not -- more deaths.

Me POTTER:

      ... are fifteen twenty-eight (15.28).

25

THE COURT:

    Fifteen twenty-eight (15.28), okay.

Me POTTER:

    Right, which is thirty-six point eight four percent

5   (36.84%).

THE COURT:

    Thirty-six point eight four percent (36.84%).

Me POTTER:

Q- Now, both in nineteen eighty-three (1983) and in

10   nineteen eighty-five (1985), Dr. Wigle, the deaths

     attributable to tobacco were about exactly twenty-six

     percent (26%) of the total. Can you explain why the

     additional deaths are so much more attributable to

     tobacco than the normal deaths, the overall deaths? Is

15   there a reason for that?

A-   Well, if the number of deaths tabulated in -- under

     column number four (4), which is actually two (2)

     columns, nineteen eighty-three (1983) and nineteen

     eighty-five (1985), if those are tabulated correctly,

20   the numbers in the final two (2) columns simply come

     from those two (2) columns multiplied by the appropriate

     attributable risk from the previous two (2) columns.

Q-   Well, I understand that, but the -- you've used the same

     relative risk for both years, haven't you?

25 A-   No.

Q-   I beg your pardon?

A-   No.

Q-   Doesn't column one (1) ...

A-   That's the relative -- okay, the same relative risk, but
5   not the same attributable risk.

Q-   I understand. But the relative risk helps calculate,
      doesn't it?

A-   Yes, but it's influenced by the proportion exposed which
      changed between eighty-three ('83) and eighty-five
10   ('85).

Q-   Are you saying that it's the proportion exposed between
      eighty-three ('83) and eighty-five ('85) which results
      in your additional deaths being thirty-seven percent
      (37%) attributable to tobacco use?

15 A-   The increase in the number of deaths, to go from
      thirty-three thousand six hundred (33,600) to
      thirty-five thousand one hundred (35,100) is -- what,
      about fifteen hundred (1,500) deaths, which is...

Q-   Fifteen twenty-eight (1,528).

20 A-   ...about four (4) -- it's a four (4) or five percent
      (5%) increase.

Q-   What I'm saying is of the additional...

A-   So it's partially due to the increased number of deaths,
      the aging, the slight aging of the population plus the
25   different attributable risk estimates based on the

changes and prevalence of smoking.

For example, if you look at men, age group eighty
(80) to eighty-four (84), you see that the proportion of
ever smokers increased from point six one (.61) to point
5   six eight (.68). And there's a large number of deaths
in that age group.

At any rate, the increase in the number of deaths
attributable to tobacco went up by four percent (4%).
It looks like part of that was due to just more deaths
10   in nineteen eighty-five (1985) and some changes in the
attributable risk estimates.

Q-   Well, when we see that -- all of the attributable deaths
are, in both years, according to you, Dr. Wigle, or to
you and your co-author, twenty-six percent (26%) of all
15   deaths, how does that jive with the forty percent (40%)
figure we were talking about before?

A-   Well, we're still in the range of about twenty-six
percent (26%) of all deaths, roughly. Let's see,
thirty-five (35) out of one thirty-three (133). There's
20   about a...

Q-   No, you said a few -- Dr. Wigle, a few minutes ago you
said that you believed that forty percent (40%) of all
deaths among males were attributable to tobacco.

A-   Among men. Here we're talking both sexes.

25 Q-   Well, let's look at the men. It's seventy-six thousand

(76,000) total deaths in eighty-three ('83) of which

twenty-one thousand (21,000) you attribute to tobacco.

That's not forty percent (40%).

A- Okay. It's -- first of all, it's a wider age range,

5   secondly, it's a different method. The figures that --

for example, men in nineteen eighty-five (1985), there

were almost twenty-two thousand (22,000) deaths

attributable to tobacco by this method. That's

twenty-two (22) out of seventy-eight (78), which is ...

10 Q- Less than thirty percent (30%)?

A- Somewhere between a third and a quarter, yes. So it's a

little under thirty percent (30%) and the Nutrition

Canada method estimate was thirty-nine percent (39%).

Q- You said you believed it was forty percent (40%)?

15 A- Well, in round numbers. Thirty-nine point four (39.4),

whatever it was.

Q- And here we have it...

A- Thirty-nine point four percent (39.4%) was the estimate

from method one (1).

20 Q- Right. Well, here's a table in the thing that you

published which says thirty percent (30%)?

A- Yes. So the two (2) methods don't agree, exactly.

Q- Now, of those tobacco-related deaths, the one thousand

five hundred and twenty-eight (1,528) tobacco-related

25   deaths, I calculated how many of those were seventy (70)

and over. And the answer is one thousand three hundred

and fifty-eight (1,358).

So, suddenly, of the additional tobacco-related

deaths, going from eighty-three ('83) to eighty-five

5   ('85), one thousand five hundred...

THE COURT:

Maître Potter, you know what you're talking about, I'm

taking notes.

Me POTTER:

10   Thank you, My Lord. That's why I'm trying to rephrase

it so we all get it. So that I understand it myself.

Q-   But of that additional number of deaths, that is to say

the tobacco related deaths went up one thousand five

hundred and twenty-eight (1,528).

15 A-   Over age seventy (70).

Q-   No, that's all of them. But those ...

A-   Okay. Okay.

Q-   ...who are aged seventy (70) and over are one thousand

three hundred and fifty-eight (1,358).

20 THE COURT:

Fifty-eight (58).

Me POTTER:

Q-   Now, Dr. Wigle, that's eighty-eight point eight seven

percent (88.87%) of your additional tobacco-related

25   deaths are age seventy (70) or over. Now, I'm a layman

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in this, Dr. Wigle, I don't know about these statistics,
but I've got to say that struck me as rather surprising.

How do we go from fifty percent (50%) overall to
suddenly eighty percent (80%), suddenly ninety percent
5   (90%) of the additional deaths are age seventy (70) or
over? How do you explain that?

A-   Well, you're talking about differences which are
actually quite small. The -- for example, men aged
seventy (70) to seventy-four (74) there was an increase
10   of ninety-nine (99) tobacco attributable deaths and in
the next age group, it's about a hundred and eighty
(180). When you start dissecting a table this large,
it's often possible to find some oddities in the data,
but in fact the summary estimates are in line, the --
15   there's about a four percent (4%) increase in the number
of deaths attributable to tobacco, but if you look in
any one age group or deaths over age seventy (70) or
some subgroups, you can get larger changes just due to
chance.

20   Q-   Due to what?

THE COURT:

Chance.

A-   Chance, variation.

Me POTTER:

25   Q-   Chance. Now, did you tell us yesterday that the

relative risk of dying from smoking goes down as you get
older?

A- Particularly for cardiovascular disease, yes.

Q- And here we have of your additional deaths, ninety

5   percent (90%) of them are aged seventy (70) or over. It
just strikes me as odd; and is the answer the same as
the one you've just given that some of these things are
just...

A- No, the...

10   Q- ...chance relationships?

A- The -- what happens is although the relative risks,
particularly for cardiovascular disease, are much higher
for younger people, there's many fewer deaths, so that
in older age groups, there's very large numbers of

15   deaths and even a lesser but still elevated relative
risk can account for more deaths in the older people
than in the younger because you're taking a small
fraction of a very large number instead of a larger
fraction of a much smaller number.

20   Q- And when you talk about those relative risks, when does
a relative risk become meaningful? Does it -- does it
have to go over two (2) to be a meaningful relative risk
or does it have to be over five (5) or what is it in
your view?

25   A- It's not that easy to specify a hard and fast rule as to

when it becomes meaningful. There's two (2) aspects to

meaningful, one (1) is is it a cause effect relationship

and the other is what is the impact on public health.

For example, the relative risk of smokers for coronary

5   heart disease is somewhere in the range of one point

five (1.5) to two (2) over an age range like thirty-five

(35) plus. This does not sound as impressive as the

relative risk for lung cancer which is ten (10) to

fifteen (15) for current smokers. However, coronary

10   heart disease is so common, it occurs in such large

numbers that a fifty (50) or a seventy percent (70%)

increased risk has a huge impact on public health. In

the order of fourteen (14,000) or fifteen thousand

(15,000) coronary heart deaths per year attributable to

15   tobacco. In terms of whether a relative risk is

meaningful as indicating causality, certainly relative

risks below two (2), the range that we see for passive

smoking, we would never accept that as evidence of cause

effect relationship based on a single study. We would

20   require multiple studies pointing in the same direction

and ruling out confounding and bias.

Q-   Right. So on the coronary heart disease, you have

relative risk ratios which are towards the low end of

the scale but you use them, nevertheless, to calculate

25   deaths which you attribute to smoking?

A-   They're on the low end of the scale but only in a
      relative sense. Like when -- with smoking we're
      accustomed to high relative risks for specific problems
      like lung cancer, the relative risk of one point seven
5   (1.7) for coronary heart disease, first of all, these
      are highly significant statistically. The -- even a
      single study can show a statistical significance because
      the disease is so common.

THE COURT:

10   Well, that's the point. I mean if you have a relative
      risk which is high...

A-   Yes.

Q-   ...you would expect to get more of this illness because
      of the relative risk.

15 A-   Yes.

Q-   But if you have an important sickness like coronary
      heart disease which is multi-factorial, your relative
      risk, the lower your relative risk, the less meaningful
      it ought to be because it's so common. It depends on so
20   many factors. It doesn't make sense to me.

A-   Well, I think this -- we have to separate a couple of
      considerations in assessing the relative risk for
      coronary heart disease. First of all, the fact that
      coronary heart disease is much more of a multi-factorial
25   disease than some of the other smoking-related

conditions like emphysema which is overwhelmingly

related to tobacco.

Q-   Yes.

A-   Coronary heart disease we have to talk about smoking,

5   elevated blood cholesterol, elevated blood pressure in

the main. But what has been shown consistently in the

literature on the coronary heart disease is that smoking

is an independent risk factor but even when you adjust

for the confounders, the effect of smoking persists. In

10   fact, smoking multiplies the risk of having high serum

cholesterol so that if you smoke and have high serum

cholesterol, you get a much greater risk than either one

alone. The...

Q-   Yes, we agree with that.

15   A-   Yes.

Q-   That's not the point but, for example, you took C.O.L.D.

or coronary -- no, chronic obstructive lung disease

which you say there, you will find a very high relative

risk?

20   A-   Yes.

Q-   Compared, for example, to C.H.D., coronary heart

disease. Why, because you see it very often in smokers.

I mean, that's why -- that's how you get to a high

relative risk. When you have a C.H.D., you see it

25   regularly but in much smaller percentage. That's why

you have a low relative risk, obviously.

A-   Yes, the emphysema occurs very rarely in non-smokers and

more commonly in smokers that gives a high relative

risk. Coronary heart disease occurs quite commonly even

5   in non-smokers but not in young non-smokers. For

example, below the age of fifty-five (55), coronary

heart disease is very rare in non-smokers and the

relative risk for smokers is -- for heavy smokers can go

up to ten (10). For example, an American study of

10   nurses who smoked thirty-five (35) or more cigarettes

per day showed a relative risk of ten (10) for coronary

heart disease, but that's ten (10) times a very small

background risk among never smokers. The attributable

risk applied to the number of deaths gives you the --

15   the, in a sense, the bottom line. For example, if it's

coronary heart disease, approximately thirty percent

(30%) of coronary heart deaths are attributable to

smoking independent of other risk factors, and that's

thirty percent (30%) of a very large number. It works

20   out in Canada to about fourteen thousand (14,000) deaths

per year, which is more than lung cancer attributable.

There's only about ten thousand (10,000) lung cancer

deaths per year attributable to tobacco. So it's thirty

percent (30%) of a large number. Tobacco -- lung

25   cancer, the smoking effect is in the order of eighty

(80) or eighty-five percent (85%) of a smaller number.

Me POTTER:

Q-   Dr. Wigle, what gets into the thirty-five thousand

     (35,000) figure, is it the fourteen thousand (14,000)

5   coronary heart disease deaths you've just talked about?

A-   Well, using the methods in this published paper, we're

     working -- we're starting with any death in the age

     range specified. The -- if you approach a disease

     specific, then the major diseases, the coronary heart

10   disease, cancer and chronic obstructive lung disease.

Q-   Well, I'm trying to find out how many of the thirty-five

     thousand (35,000), your guess, died of coronary heart

     disease?

A-   About fourteen thousand (14,000).

15   Q-   About fourteen thousand (14,000)?

A-   Yes.

Q-   And is it your testimony that those fourteen thousand

     (14,000) had no other risk factor except smoking?

A-   No, it's my testimony that if those people did not

20   smoke, they would not have died in that age group. They

     would have died later.

Q-   Is it your testimony that they had no other risk factor

     except smoking? You've just said a few seconds ago that

     fourteen thousand (14,000) have a relative risk quite

25   independent of other risk factors. Are you saying that

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you can say positively that they did not show other risk

factors?

A-   The...

Q-   Are there fourteen thousand (14,000) people who die of

5   coronary heart disease, who smoke but who show no

obesity, who show no problem with exercise, who show no

problem with cholesterol? Is that what you're saying?

A-   No. What I'm saying is two (2) things. One, that the

fourteen thousand (14,000) figure is based on relative

10   risk estimates from the Nutrition Canada cohort adjusted

for high blood pressure and diabetes, not adjusted for

cholesterol because it was not a confounder. Certainly

among those fourteen thousand (14,000), some would have

one (1) or more other risk factors, the important thing

15   being that if, for example, they had high cholesterol,

they had multiplied their cholesterol risk by their

smoking risk. So that the smoking risk -- if, for

example, all Canadians had low cholesterols and normal

blood pressure, the smoking risk would not be as high as

20   it is. It does multiply the other risks.

THE COURT:

23/0066   Q-   Yes, but you say Nutrition Canada took into account that

fact.

A-   Yes.

25   Q-   The survey. Therefore they eliminated those factors?

A- Yes, the fourteen thousand (14,000) are those deaths
   that are attributable to tobacco...

Q- Only. Leaving alone cholesterol?

A- Well...

5 Q- That's why they took into account the confounding
   effect. Otherwise, they wouldn't take it into account.

A- Okay, the fourteen thousand (14,000) figure is our best
   estimate of the independent effect of smoking.

Q- Right, independent.

10 A- It does not mean that we know every risk factor. For
   example, maybe some of the smokers had another risk
   factor, like lack of exercise, which we had not measured
   in the Nutrition Canada cohort, which accounted for some
   of the residual risk attributed to tobacco. So we can't
15 say for sure that all fourteen thousand (14,000) were
   only caused by tobacco.

Me POTTER:

Q- Of those fourteen thousand (14,000), Dr. Wigle, is it a
   safe guess that seven thousand (7,000) were over seventy
20 (70)?

A- I wouldn't want to guess. It would be a high fraction
   that would be over seventy (70), but whether it's fifty
   percent (50%) or forty (40%) or even over fifty (50%),
   I'm not sure. You'd have to work it out, but it would
25 be a sizeable fraction.

Q-   M'hm. Now, speaking of coronary heart disease, you have

in your report a chapter on coronary heart disease and I

can draw your attention to it if you want. It's at

chapter 3.3.

5   Me POTTER:

I'm sorry, My Lord. I have a copy which does not have

the pages numbered, but it should be around page twelve

(12) or thirteen (13).

THE COURT:

10   Table 4.3?

Me POTTER:

Chapter 3.3.

Me JOYAL:

Ten (10).

15   Me POTTER:

Page ten (10)? Thank you.

A-   3.3?

Q-   3.3. That's chapter 3.3.

THE COURT:

20   I have it. I have it.

Me POTTER:

You have it? Oh, I'm sorry.

Q-   I'm in that first paragraph, Dr. Wigle, and I see in the

fifth (5th) line a reference to sudden cardiac death.

25   I'm not a doctor, I have no -- but I admit never having

heard that term. What is sudden cardiac death? Is that

sudden death of the heart or a sudden death due to a

problem with the heart? What's sudden cardiac death?

A- First, excuse me, where are you?

5 Q- First words of the fifth (5th) line of the first

paragraph in chapter 3.3.

A- Cigarette smokers have two (2) to four (4) times the

risk of sudden cardiac death compared to non-smokers.

About half of all deaths from coronary heart disease

10 occur quite suddenly, outside of hospital, and the

victims there are usually dead on arrival at the

hospital. The vast majority of these occur very

rapidly, either -- certainly less than an hour or a lot

of them in less than fifteen (15) minutes. Some of the

15 people literally drop dead from myocardial fibrillation.

Others may live a few minutes and then die, but they

don't get to hospital alive.

Q- So are we talking about coronary heart disease deaths

which occur suddenly?

20 A- Very suddenly, yes.

Q- But that's what it is, coronary heart disease death?

A- Yes.

Q- Yes.

A- Well, that's the -- that diagnosis is based on a

25 previous history, the -- any witnesses of the event.

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For example, did the victim report chest pain to a
relative or a witness and if there was an autopsy, was
the lesion available or obvious at autopsy.

Q- You're not -- does it include ventricular fibrillation?

5   A- The most sudden ones, where the person literally drops
dead, all of those virtually would be ventricular
fibrillation.

Q- And does it include both deaths from heart attack and
heart disease?

10 A- The people who die very suddenly, they don't all have
extensive coronary artery disease. It would appear that
some of them have so-called irritable heart muscle,
possibly from the acute effects of smoking, at least
when we're talking about the risks among smokers. You

15 can get sudden death among young non-smokers, for
example every now and then a young athlete will drop
dead, possibly due to some congenital anomaly of the
nerve supply to the heart or even unknown reasons.

Q- That's what I'm trying to get at, Doctor. There is a

20 lot of unknown reasons there, aren't there, in those
deaths?

A- Um -- in terms of external causes, yes, the -- we do
know that cigarette smokers, current smokers have a
greatly increased risk of such death and that the --

25 it's believed to be based on acute toxic effects of

smoking, such as carbon monoxide and constriction of the

coronary arteries.

Q- It's believed to be? Is that what you said?

A- Yes.

5   Q- Yes. And if we turn the page, Dr. Wigle, we see your

table of relative risks for the coronary heart disease

going down to something around one point three (1.3)

with one study as high as three (3).

A- Yes.

10 Q- Those are the ones you wanted us to know about and they

indicate to you a certain consistency, do they? Is that

right?

A- These are for coronary heart disease. The -- which

would include sudden death with other types of coronary

15 heart disease. The range is one point three (1.3)

roughly to about three (3) in studies done in different

countries and at different points in time.

Q- Well, my answer was: they indicate to you a certain

consistency, do they?

20 A- There's some consistency, but there's still quite a wide

range in the risk estimates. The consistency is that

the risks tend to be greater than one (1), the

inconsistency is that the range is quite wide.

Q- And do you agree that consistency is one of the most

25 important criteria in drawing conclusions from

epidemiological data?

A- Yes. We look for consistency. We also look for

explanations for lack of consistency. For example, the

Swedish men here, even those who smoke more than fifteen

5   (15) or more cigarettes per day had a relative risk of

-- I believe we're talking current cigarette smokers

here, had a relative risk of the order of one point five

(1.5) or actually one point seven (1.7), and males in

the American Cancer Society, which is at the very top,

10   had a relative risk of about three (3).

One would want to look further to see what is the

history of smoking in Sweden. Did it begin in a big way

in the nineteen twenties (1920s) like it did in the

United States, because it seems to take -- well, the

15   effect of smoking and coronary heart disease takes the

order of three (3) decades to show up once the person

starts to smoke in any -- the major risk is not seen in

less than three (3) decades after starting to smoke. So

that some of the differences between countries would

20   reflect long-term smoking patterns. For example,

cigarette smoking did not become common in Japan until

during and after the Second World War.

Q- And if you turn a few pages further on, Dr. Wigle, to

figure 2, you have a similar table for stroke. And here

25   we have -- there are in fact eighteen (18) studies

listed here, Dr. Wigle, ten (10) of which, the bottom

ten (10), seem to be under one point five (1.5).

Now, in your opinion is that something that you can

use in order to draw any conclusions between smoking and

5   stroke?

A- It's -- let's see...

It looks like it's about six (6) studies that are

under one point five (1.5). And for several of the

studies we're showing males and females separately, so

10 you know the Swedish survey's there on men and women.

It's not two (2) studies, it's one (1) study.

Q- Well, we're showing our different bias here, Dr. Wigle,

I'm displaying my bias. I have decided that Canadian

Health Survey male and female looks to be one point four

15 nine (1.49), under one point five (1.5).

Anyway, whether you agree with me or disagree with

me on that, I think you'll agree that it's either nine

(9) or ten (10) of these eighteen (18) studies show a

relative risk below one point five (1.5).

20 A- If you count Canada Health survey it's seven (7)

studies.

Q- Oh, I'm sorry, because you're combining Canadian --

that's male and female?

A- Yes, it's one (1) study.

25 Q- Similarly would the U.S. nurses be one (1) study rather

than three (3)?

A- Yes. That's three (3) different levels of cigarette smoking in one (1) study.

Q- And the Manitoba male and female would be one (1) study?

5 A- Yes.

Q- So you would count six (6) showing more than one point five (1.5) and seven (7) showing less than one point five (1.5), is that right?

A- Yes, the other big difference is that the earlier

10 studies on smoking showed less of a risk for stroke than in more recent studies. For example, the more recent American Cancer Society cohort and the U.S. Nurses study and the Nutrition Canada study and the Honolulu heart study and the Canada Health survey show risks roughly

15 one point five (1.5) or greater. The Canadian Veteran's study showed very little, if anything, in the way of a risk.

It's possible that there's more than one explanation for these changes over time. The diagnosis

20 of stroke is more accurate now with CAT scans and so on than it was previously. Also strokes tend to develop among the very elderly. There's very few stroke deaths before age seventy (70). But it may be a very long-term effect of smoking that didn't show up in the earlier

25 studies.

Q- Okay. Now how many strokes are in your thirty-five
thousand (35,000) figure?

A- Below age seventy (70) -- well, in the age range
thirty-five (35) to seventy-nine (79), I don't know the
5   exact figure, but it would not be terribly large. It
might be in the order of a thousand (1,000).

Q- So one thousand (1,000) below age seventy-nine (79) and
how much up to age of -- how high did you go again? I
forget. How much up to age eighty-four (84)? How many
10 strokes are in there, Dr. Wigle?

A- Okay. What I'm looking at is estimates for nineteen
eighty-seven (1987) for ever smoking deaths for Canada,
based on the relative risk from the recent American
Cancer Society cohort study, and it shows about eight
15 hundred (800) stroke deaths below age sixty-five (65),
age range thirty-five (35) to sixty-four (64).
Sixty-five (65) plus another sixteen hundred (1,600)
deaths. So two-thirds of those stroke deaths
attributable to tobacco were over the age of sixty-five
20 (65).

Q- So how many stroke deaths are in the thirty-five
thousand (35,000) do you guess?

A- I would say roughly a thousand (1,000) in round numbers.

Q- A thousand (1,000).

25 A- It could be a little less or a little more.

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Q- Okay. And that's what percentage of all stroke deaths?

A- Of all stroke deaths?

Q- Yes.

A- Let's see -- it's about thirteen (13,000) or fourteen

5   thousand (14,000) stroke deaths. So it'd be about seven

       percent (7%).

Q- Seven percent (7%) ...

A- Below age eighty (80).

Q- And above age eighty (80)?

10 A- Well, the estimate for tobacco for all ages -- well,

       thirty-five plus (35+) is just over twenty-four hundred

       (2,400), which would be twenty percent (20%).

Q- Twenty percent (20%)?

A- About in the order of sixteen (16) or seventeen percent

15   (17%) of all stroke deaths.

Q- Okay. And you have in front of you a table showing

       either ten (10) out of eighteen (18) or -- I forget the

       number -- seven (7) out of thirteen (13). Anyway, a

       majority of studies showing a relative risk factor of

20   less than one point five (1.5) and you nevertheless give

       up to seven (7) -- sixteen (16), seventeen percent (17%)

       of strokes and put them into your thirty-five thousand

       (35,000) figure; does that seem correct to you?

A- The more recent studies tend to show greater risk than

25   the earlier studies. We note that the lower studies are

from Sweden and Japan...

Q-   And Canada.

A-   And Japan, where the history of smoking is different

     from Canada. From the Canadian Veterans study which was

5   initiated in the -- around nineteen fifty-six (1956) or

     eight ('8), somewhere in there.

THE COURT:

     Is Sweden different from Canada?

A-   The long-term smoking patterns in Canada and Sweden are

10   quite different. If you look at per capita tobacco

     consumption the -- England and the United States were

     the first countries to have very high levels of tobacco

     consumption. Finland was very early.

         The countries that have increased -- Canada

15   increased a lot during the nineteen thirties (1930s),

     Japan increased a lot after World War II, Sweden, to the

     best of my memory, is -- did not go up as early as

     Canada. And never has come as high in terms of per

     capita tobacco consumption. Even today Sweden is lower

20   than Canada, but I think the important thing is that if

     you look at the more recently conducted studies, that

     smoking is causally related to the risk of stroke. How

     it relates to our thirty-five thousand (35,000) deaths,

     it could be in the order of a thousand (1,000) deaths.

25   But undoubtedly, there's a causal relationship between

smoking and stroke.

Me POTTER:

Q- Well, I'm going to move on from there. Now, all of this has to do with your calculation, Dr. Wigle, of what I

5 think people in your trade call excess mortality.

A- Yes.

Q- Isn't that right?

A- Yes.

Q- Now, what appears in that exhibit, RJR-159, is a

10 calculation of excess mortality by way of number of deaths.

A- Yes.

Q- Are there other ways to express excess mortality?

A- Yes, one can look at the effect on potential years of

15 life loss or life expectancy.

Q- M'hm. And have you done calculations like that?

A- For -- related to smoking?

Q- Let's say relating to anything?

A- We've looked at -- well, first of all, in terms of life

20 expectancy, we've looked at the effect that eliminating all cancer deaths would have on life expectancy.

Q- That's not what I asked, Dr. Wigle.

A- And we've also done life table projections for how many people will die in the future under different smoking

25 scenarios. That's in a master's thesis by one of our

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students.

Q- And, Dr. Wigle, that also has to do with numbers of
   deaths, doesn't it?

A- Yes, but it's a different method.

5 Q- Right.

A- It's projecting into the future.

Q- What I asked you was whether you had done studies of
   excess mortality from the standpoint of potential years
   of life lost rather than through ...

10 A- Yes. Yes.

Q- ... numbers of years?

A- Yes.

Q- You have? Have you done so in relation to smoking?

A- Potential years of life lost?

15 Q- Yes.

A- Yes, that's in at least one (1) report, which is the
   same master's thesis. I think it's also been reported
   in Chronic Diseases in Canada, but I'm not sure.

Q- And have you done any studies of the potential years of

20 life lost due to the consumption of alcohol?

A- Potential years of life lost?

Q- Yes.

A- We've looked at deaths before age seventy-five (75). I
   think there's at least one (1) article done by Dr. Mao

25 in our group looking at potential years of life lost...

Q-   Yes.

A-   ...related to alcohol. Actually I'm not sure whether
     that's published yet or not.

Q-   Well, we'll try not to scoop him.

5   Why don't you have a look at Exhibit RJR-161, Dr.
     Wigle. And that's the November nineteen seventy-seven
     (1977) article: "Premature Mortality by Ouellet, Roe,
     Major and Lance."   I draw your attention to page
     twenty-five (25).

10   A-   Yes.

Q-   Okay. Now, here what we have, and correct me when I go
     wrong, but this is something from your department; is it
     not.

A-   It's a report from nineteen seventy-seven (1977) from
15   three (3) people in our department, yes.

Q-   Right.   Three (3) people in your department; isn't that
     right?

A-   Yes.

Q-   And correct me if I go wrong, but in this table they try
20   to compare excess mortality due to smoking and excess
     mortality due to hazardous consumption of alcohol, but
     both of them they try to express in terms of numbers of
     deaths and in terms of potential years of life lost;
     don't they?

25   A-   Yes.

Q-   Yes. Now, before going on, Dr. Wigle, can you explain

     why it is in the more recent years, from nineteen

     eighty-five (1985) and on, you have not expressed excess

     mortality in terms of potential years of life lost? Why

5   did you decide not to do that?

A-   Well, we use -- actually we use potential years of life

     lost very commonly for ranking the impact of diseases on

     health. We haven't done smoking or alcohol specific

     estimates of potential years of life lost very often,

10   but we have done some. For example, the smoking one is

     in a master's thesis by Christine Friedenreich, who

     worked in our...

Q-   You'd better spell that. Not the Christine, the other

     one.

15   A-   F-R-I-E-D-E-N-R-E-I-C-H. That's just in her master's

     thesis at this stage.

Q-   Yes. No, my question was: you, Dr. Wigle, why did you

     decide to express all your views on excess mortality in

     terms only of deaths and not in terms of potential years

20   of life lost?

A-   Well, we used both estimates to assess the impact of

     disease on Canadians. In terms of tobacco, the -- I

     think the attraction of working with the number of

     deaths is that it's easier to understand. A lot of

25   people don't understand what potential years of life

lost really means and, but we do use potential years of

life lost in some of our reports because it does give

more weight to the deaths at an early age. For example,

the deaths from injuries related to alcohol.

5   Q-   M'hm.

A-   Nevertheless, it's more difficult to convey to people

what that means.

Q-   But why did you, Doctor, in coming out with your expert

report and in coming out with your article RJR-159, why

10   did you decide only to talk in terms of numbers of

deaths?

A-   I guess mainly for reasons of simplicity. We didn't

actively consider potential years of life lost and rule

it out. In fact, I believe Dr. Mao does have a report

15   looking at smoking and potential years of life lost

attributable to tobacco in the works. We just don't do

everything at any one point in time, we do -- we make

different decisions for different reasons at different

points in time.

20   Q-   Well, let's look at page five (5) then of this document?

THE COURT:

Of?

Me POTTER:

The same document, My Lord.

25   Q-   And in the third paragraph on page five (5), Dr. Wigle,

and it begins:

"Although potential years of life lost is the

preferred method of measuring premature

mortality for certain causes of death, there

5   are some notable differences in the relative

importance of a particular cause, depending on

whether we look at deaths or potential years

of life lost between ages 1 and 70."

Do you agree with that?

10 A- Yes and no. We use potential years of life lost a lot,

because it does give more weight to the younger deaths,

so that it's easier, for example, to convey the

importance of injuries and suicide by showing that

potential years of life lost is -- for each death among

15   -- the young accident victim, is greater than for

someone who dies in their sixties (60s), for example.

To say that it's the preferred method, I think it's

certainly preferred to these authors, but I'm not aware

that the public health community at large has agreed on

20   what is the preferred method. It's a widely used index,

but I don't think there's any formal consensus that it

is the best measure of premature mortality. It is a

very good index.

Q- What's your view? Which is it better to use?

25 A- I think my view is expressed by our own work, which is

we use it very commonly, and -- but we don't usually

attribute potential years of life lost by risk factor.

We're starting to do work in that area. For example,

there is this master's thesis by Friedenreich, which

5   does look at potential years of life lost attributable

to tobacco.

Q-   And it can be done, can it not, Dr. Wigle?

A-   Yes.

Q-   Yes.

10   A-   Yes.

Q-   Okay. Now, I'm showing you an article -- could you help

me, Dr. Wigle, and pass a copy to Mr. Evraire.

A-   Sure.

THE COURT:

15   Well, gentlemen, you will be happy to know that I've

just terminated my second book.

Me POTTER:

Into Volume III, My Lord.

THE COURT:

20   And now going on tobacco case, Volume III.

Me EVRAIRE:

It's amazing, My Lord, when you compare the new book to

the old, how much thicker, with all the knowledge you've

acquired, the other one is now. See how much thicker it

25   is. It's amazing how...

Me POTTER:

It's all that ink.

Me EVRAIRE:

...how you can add that right up.

5 THE COURT:

So, I'm going...

Me POTTER:

Okay, now I want...

THE COURT:

10   Just give me a minute to take the time, please, to enjoy

the...

Me POTTER:

Oh, I'm sorry, that's right, you have to date it, yes.

THE COURT:

15   ...first of three hundred (300) pages, make sure that I

have all the details.

Me EVRAIRE:

Est-ce que les procureurs devraient s'identifier pour le

nouveau livre?

20 THE COURT:

No, you don't need to do that.

Me POTTER:

Q-   Now, Dr. Wigle, here we have something which appeared in

June, nineteen eighty-six (1986) issue of Chronic

25   Diseases Canada and it's something that you wrote, I

think, on pages five (5) and six (6) entitled "Health

Status Indicators". Did you write this?

A- Yes.

Q- And if we go to the very last paragraph, after you've

5   considered various things in a table, your last

paragraph you -- I'm asking you if you wrote this?

      "I favour potential years of life lost before

      age 75 as the best -- as the single best index

      of the impact of a disease. However, use of a

10   range of health indicators is essential to

      assess chronic conditions such as arthritis.

      It is interesting to note that cancer ranks

      very high as a cause of premature death and

      hospital days but low on most other indices

15   considered here?"

    Did you write that?

A- Yes.

Q- And is it true that you favour potential years of life

    lost before age seventy-five (75) as the single best

20   index of the impact of a disease?

A- Yes, and in brackets it states there that age

    seventy-five (75) is the current average life expectancy

    for Canadians.

Q- Yes, but what you said in that sentence is true, is it?

25 A- Yes, that's my personal feeling.

Q- And if we look at potential years of life lost due to tobacco use or potential years of life lost due to the hazardous drinking, do you have any view as to which ranks highest?

A- We know that very roughly there are about eight thousand (8,000) deaths annually attributable to tobacco -- or alcohol in Canada before the age of seventy-five (75). This is from a paper that we have that's been submitted for publication. These deaths occur on average at an earlier age than smoking-related deaths. If we converted the alcohol attributable deaths to potential years of life lost and did the same for tobacco, my best guess is that tobacco would still come out ahead because there is over four (4) times as many deaths so that even though they do occur in -- at an average older age, tobacco probably would still come out ahead.

Q- And am I right, Dr. Wigle, that that is so if you include the people who have already given up smoking?

A- The thirty-five thousand (35,000), yes.

Q- Yes.

A- Yes.

Q- And if you look at current smoking compared to current drinking, which comes out ahead?

A- Well, in terms of death, you're talking in the order of...

Q-   No, no, in terms of potential years of life lost?

A-   I think the best way to -- to answer your question would

      be to do the calculation rather than speculate.

Q-   Well, it's done in this Exhibit RJR-161 in your

5   department, Dr. Wigle...

A-   But that's using...

Q-   It's on page twenty-five (25).

A-   It's using very old data and it's done using completely

      different methods.

10 THE COURT:

      What page, I'm sorry?

    Me POTTER:

      Page twenty-five (25), the table we saw.

Q-   Anyway, you -- you would say let's not rely on that,

15   it's done too long ago?

A-   Yes, the main problem with this report, in fact, just on

      a quick scan is that the source of the relative risk

      estimates is old studies. For example, it's the old

      Hammond study which has -- it was fairly reliable for

20   the estimate for men but it's a gross underestimate of

      the current risk for women.

Q-   Well, I'd like you to read it again, Dr. Wigle, you can

      see that they use -- you'll see that they use not only

      Hammond but Wynder.

25 A-   Wynder was for cancer of the mouth, I believe, only, and

again an older study.

Q- So what you're saying is you'd like to use relative
risks ratios which aren't too old?

A- Actually, the best available right now would be the

5   American Cancer Society Cancer Prevention Survey II,
which only became available in the last year.

Q- So, what I get from you, Dr. Wigle, is that you have a
guess but you haven't done the work and you don't know
whether current smoking or current drinking results in

10   the greatest number of potential years of life lost?

A- I don't know for sure but certainly they're both --
they're each major problems.

Q- Major problems.

THE COURT:

15   Is it worthwhile taking a break?

Me POTTER:

Perhaps, My Lord, I'm in your hands. I'll be fifteen
(15) more minutes.

THE COURT:

20   Avez-vous un réinterrogatoire?

Me EVRAIRE:

Oui, environ vingt (20) minutes.

SHORT RECESS

25

Me POTTER:

 My Lord, before moving on, could I produce this as an

 exhibit, the article...

THE COURT:

5 Oh yes.

Me POTTER:

 ... of June nineteen eighty-six (1986)? It will be

 Exhibit ITL-35.

THE COURT:

10 You've been modest.

Me POTTER:

 Next to Mr. Earl Cherniak, it is with reason.

Q- I don't know if you know this, Dr. Wigle, but this is a

 case about advertising and I'd like to talk to you a bit

15 about advertising.

  In Exhibit RJR-158, which is your nineteen

 eighty-six (1986) article, "Socioeconomic disparities in

 risk factors" -- I'm looking at page one thirty-one

 (131), Doctor, and I'll be talking to you about the

20 right-hand column of that page, the second paragraph

 which begins "The decline". And what you say here,

 after a discussion of the socioeconomic disparities in

 risk factors for cardiovascular disease and after

 recognizing that there has been a decline in smoking

25 prevalence, you point out that the decline has also been

inconsistent among socioeconomic groups, that is to say

some socioeconomic groups have had incidence declines

which are greater than other socioeconomic groups.

Isn't that correct?

27/0092 5   A-   Yes.

Q-   Yes. And in your job, Dr. Wigle, do you follow

statistics about the incidence of smoking?

A-   Yes.

Q-   Yes. And as a general proposition, can we say that the

10   incidence of smoking in Canada has been coming down for

a long time?

A-   Well, the per capita tobacco consumption has been

declining since about nineteen eighty-three (1983). The

prevalence or the percent of men and women who smoke --

15   first of all, the percent of men who smoke peeked around

the mid-sixties, nineteen sixty-six (1966), it's

declined since then; for women, it's -- the trend was

somewhat flatter and the sex difference is in the

education effect as well.

20   Q-   Anyway, the decline among the men, which used to be the

big smokers, that started twenty-four (24) years ago,

did it?

A-   Approximately, yes.

Q-   Yes. And what you're saying in this paragraph, in this

25   article, is that the rate of decline is different

depending on the socioeconomic group that we look at?

A-   Yes.

Q-   Isn't that correct?

A-   Yes.

5   Q-   And you say in that first sentence, or you suggest, you

wonder, you say:

"The decline in smoking prevalence by

education level between '75 and '83 suggests

that socioeconomic groups in Canada may vary

10   in their responsiveness to information about

lifestyle-related health risks."

Now, Dr. Wigle, are you saying there that it might be

possible that different people in different

socioeconomic groups react differently to the health

15   message that the government has been trying to get out

about tobacco?

A-   That would be at least part of the explanation as to why

it seems to be the better educated people who are

quitting smoking.

20   Q-   Okay, now before we go any further, Doctor, I want to

make sure on what basis you're here. I think I'm right

in saying you don't have any particular expertise in

advertising?

A-   None.

25   Q-   None. And you don't have any expertise in knowing

either how effective an anti-tobacco ad is or why it --

why it is effective or not effective, do you?

A- No, I can only assess what I read in the literature. I

haven't done any research in that area.

5   Q- And in fact, you have no expertise in that area, do you?

A- No, I haven't done research in that area.

Q- No. So what you say here, in this first paragraph, am I

right in saying it's a supposition, Dr. Wigle, that

you're supposing that it is possible that a different

10   socioeconomic group may react differently to the health

message? You're not saying that that is your opinion,

are you?

A- The -- actually what is stated in that paragraph is --

it's speculation about one thing, one difference that

15   might exist between socioeconomic groups...

Q- Right.

A- ... which is responsiveness to information.

Q- Yes.

A- There are other differences which could account for the

20   observed smoking patterns.

Q- Okay. So it's speculation. And what I'm trying to get

at, Doctor, is that you don't have any particular

expertise to say whether that speculation is correct or

not, do you?

25   A- No, except it does seems to be part of a general pattern

that when health-promoting programs are conducted, for

example the introduction of the pap smear to detect

cervical cancer at an early stage, these types of

preventive behaviours or health-promoting behaviours

5   tend to get picked up first by the better educated and

higher income segment of the population.

Q-   Yes, you can see the pattern, but what I'm putting to

you, Doctor, is that you don't have the expertise, and

you don't hold yourself out as having it, to tell us

10   what the cause is?

A-   No.

Q-   No. So you can see the pattern and you suspect that

this may be an explanation, but you don't know, do you?

A-   I think it's quite likely, but I wouldn't -- I

15   wouldn't...

Q-   Okay.

A-   ... go beyond speculation.

Q-   Well, the anti-cigarette advertising, do you have any

expertise on which to say that that anti-cigarette

20   advertising has more of an effect or less of an effect

on people in lower socioeconomic groups? Do you have an

expertise on which to say that?

A-   Just the knowledge I have from reviewing the scientific

literature, including articles by people who have done

25   research in that area...

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Q-   M'hm.

A-   ... and it would appear that in general, if a new idea,
      whether it's a health idea or other ideas introduced,
      it's the more affluent, better educated segment that
5   reacts earlier and the other people tend to react later,
      in general.

Q-   In general. So let's come back to my question. Do you
      have expertise on which to say that the anti-cigarette
      message of the government is more or less effective on
10   members of low socioeconomic groups? Do you know
      whether that advertising affects them more or less than
      other people?

A-   I don't know for sure, but I would suspect that any
      education done on tobacco would -- up-to-date at least
15   -- would be more likely to reach the higher income,
      better educated segment and be effective.

Q-   M'hm. And you don't have any particular expertise on
      which to say that advertising is -- that people in --
      that poor people are more prone to manipulation by
20   advertising than rich people?

A-   No, I don't have any expertise in that area.

Q-   No, and you've spoken about the different rates of
      decline between men and women in prevalence. You don't
      have any expertise on which to say that women are more
25   prone to manipulation than men, do you?

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A- By advertising?

Q- Yes?

A- No, no.

Q- No; and when we were speaking about alcohol before and
the serious problem that you called it, you don't have
any expertise on which to say that those people are
drinking to excess because of advertising, do you?

A- Well, people may drink to excess...

Q- I'm asking you if you have expertise, Dr. Wigle, on
which to say something like that?

A- No.

Q- No.

A- But I mean there's many reasons other than advertising
for drinking to excess.

Q- Yes. So if we go to Exhibit RJR-150, which is your
article "The Tobacco Industry is Still Resourceful" --
and I'm on page fifteen thirty-eight (1538). The
right-hand column, the paragraph -- the second paragraph
beginning "Apologists". You make statements in there
about arguments relating to the effectiveness of
advertising. Dr. Wigle, I put it to you that you have
no expertise at all on which to say anything about the
effect of advertising, whether it has an effect on
overall consumption or on market share, do you?

A- The...

Q- Dr. Wigle, just answer my question. Do you have
expertise on which to say anything about the effect of
commercial advertising?

A- I don't have the expertise to present personal views

5 but...

Q- Well, that's fine, thank you.

A- ...but I would have the exper...

Q- If you don't have the expertise that's enough.

Me EVRAIRE:

10 Let him answer, let him answer.

Me POTTER:

If he has no expertise, I don't think he should be
giving his view.

Me EVRAIRE:

15 Well, I'll ask him after then.

Me POTTER:

Well, you ask him for his view outside his expertise and
we'll see what happens.

Q- Now, I'll be coming back to that article in a minute,

20 Dr. Wigle, but in your report, at page thirty-nine (39.

THE COURT:

You've numbered your pages.

Me POTTER:

Q- I happened to glanced on Mr. Cherniak's and in -- in the

25 last paragraph, before the conclusion on page

thirty-nine (39).

A- Yes.

Q- Yes -- you make statements there about what we might expect to get out of Bill C-51.

5 A- Yes.

Q- And helping us by advertise -- by doing something to advertising which might do something to demand. I put it to you, Dr. Wigle, and I want an answer to my precise question, you don't have any expertise and you are not

10 offered as someone having expertise on the question of the effect of commercial advertising, do you?

A- No.

Q- No, thank you.

A- I thought you were going to address this paragraph.

15 Q- Well, I guess I just want to find out from -- from what point of view it's coming but it's not coming from your expertise?

A- No.

Q- No.

20 A- It's more of a personal opinion ...

Q- Right.

A- ...than an expert opinion.

Q- Thank you. Now, let's go back then to Exhibit RJR-150, the article you were looking at before, and do you

25 remember the discussion yesterday about obscenity?

A- Yes.

Q- And you -- you stated your view that it was hypocritical
and therefore obscene, I think I'm not misstating you,
to associate tobacco products with athletic events?

5   A- Yes.

Q- Do you consider it obscene to associate tobacco products
with musical events or theatrical events?

A- I consider it, perhaps, slightly less hypocritical than
with a -- what's clearly a health-promoting activity,

10   which is exercises.

Q- Well, let's deal with the music or the theatre. Do you
consider it at all hypocritical to associate tobacco
with cultural events, musical events, musical festivals,
is it hypocritical, Dr. Wigle?

15 A- I think any activity that's designed to promote tobacco
is hypocritical.

Q- Any activity designed to promote the legal product
tobacco is hypocritical, is that correct?

A- Hypocritical of society, perhaps not hypocritical of the

20   industry.

Q- So anything done in order to sell that legal product is
hypocritical, is that correct?

A- On behalf of society, yes.

Q- It's hypocritical on behalf of society?

25 A- To allow the promotion of a product that in the view of

many experts is addictive and which undoubtedly is the

major preventable cause of early death in Canada.

Q- Is it therefore hypocritical, Dr. Wigle, to allow the

sale of that product?

5 A- Possibly, but there's the political reality that there's

still six (6) million smokers in Canada.

Q- That's right, who like it; and now on that same article,

Dr. Wigle, you quote at the bottom of that same

paragraph, underneath the obscenity business, you quote

10 excerpts from what you call, in that article, tobacco

industry reports?

A- Yes.

Q- And from your footnote, I see that you're looking at a

staff report on the cigarette advertising investigation?

15 A- Yes.

Q- And, My Lord, you've already seen this. This was

Exhibit AG-119. You've also seen, My Lord, Exhibit

AG-119-A which were confidential extracts from that

staff report. Now you, Dr. Wigle, did you see

20 confidential extracts of that report or did you just see

the report itself?

A- I saw extracts. I didn't see an entire report.

Q- You didn't see an entire report?

A- No.

25 Q- No. And when you published this, did you then know that

there had been libel proceedings in the United States

based on affirmations like yours?

A- Based on that reference, a staff report on...

Q- Based on affirmations like yours that if tobacco

5   industry reports showed that. Did you know that there

were libel proceedings in the United States based on

that affirmation?

A- I'm not clear as to whether the question is in general

or related to the reference number two (2) of the staff

10   report.

Q- When I say libel proceedings, are you at a loss? Is it

a complete blank or do you know what I'm talking about?

A- I'm not aware of such proceedings, but I'm not sure that

you're referring to them in the context of this

15   reference number two (2) or something else.

Q- You affirm in that article, Dr. Wigle, that there were

excerpts from tobacco industry reports showing X.

A- Which is Myers et al, staff report on cigarette

advertising.

20 Q- Yes, well, the fact is: Myers does not refer to tobacco

industry reports, but to suggestions coming in from

advertising agencies. And because of that, Dr. Wigle,

libel proceedings, successful libel proceedings, were

launched in the United States and I'm asking you if you

25   were aware of that?

A-   No.

Q-   And were you ever aware of that?

A-   No.

Q-   Even as I ask you the question, you've never heard of
5   that before?

A-   Correct.

Q-   And when you -- was this your writing or was it Peter
     Morgan's writing?

A-   Well, the except is here, the quotation...

10   Q-   The reason I asked the question, Dr. Wigle, is that
     other questions on this article have elicited a response
     from you that the writing was not really yours but Dr.
     Morgan's. Did you participate in putting that in there
     or was it he?

15   A-   Well, we share responsibility for the whole article. In
     terms of the definition of obscenity, journal editors
     like to have definitions. But we share responsibility
     for the whole article.

Q-   Now, where do you sit in the Department of Health and
20   Welfare? If we look at the family tree inside there,
     are you in the same branch as Neil Collishaw?

A-   The same branch, yes.

Q-   And is he above you or below you?

A-   Sort of obliquely sideways.

25   Q-   Obliquely sideways.

A-   Yes.

Q-   So do you both answer to the same superior?

A-   I report to Dr. Losos who reports to Dr. Liston. Neil
      reports to Dee Morrison who reports to Claire Franklyn,
5   I believe, who reports to -- or Peter Toft who reports
      to Peter -- to Roy Hickman who reports to Liston.

Q-   Okay.

A-   So he's a cousin, second removed.

Q-   He's a cousin, second removed, but you both have the
10   same grandfather: Dr. Liston?

A-   I guess.

Q-   Right; and...

A-   Godfather.

Q-   So you both report ultimately to him who reports up the
15   line?

A-   Yes.

Q-   Is that right?

A-   Yes.

Q-   And when Bill C-51 came out and was attacked in these
20   proceedings, do you know if you received the same
      instructions as Neil Collishaw as to what to do about
      Bill C-51? Was your department instructed that it
      should do what was necessary to protect Bill C-51?

A-   No, I was approached directly by Neil to consider
25   providing evidence. The -- I then wrote a memo to my

director and director general requesting permission to

provide evidence and that was -- the director general,

who is Dr. Losos, discussed it with Dr. Liston and I was

given such approval. In fact, I was encouraged to go on

5   and do it.

Q-   You were encouraged to give that evidence.

A-   Yes.

Q-   By your department. By your employer?

A-   Yes.

10 Q-   Is that right?

A-   Yes.

Q-   Okay. Now, Dr. Wigle, do you remember the discussion of

your resignation in November of nineteen eighty-seven

(1987) from the Non-Smokers Rights Association?

15 A-   Yes.

Q-   And RJR-151, which I'm showing you, there is the cover

note which went from Dr. Losos to Janice Hopkins. Is

that the same Dr. Losos you've just mentioned?

A-   Yes, he's our director general.

20 Q-   Right. And that's the same Dr. Losos that you mentioned

yesterday, the person to whom you had spoken about -- I

forget. Did you speak to him about intemperate remarks

or about belonging to the N.S.R.A.?

A-   The headline in the Canadian Press article.

25 Q-   M'hm. And it was -- you sent a copy of your letter of

resignation from the N.S.R.A. to Dr. Losos?

A-   Yes. Yes.

Q-   Why did you bother sending him a copy of your letter of resignation?

5 A-   Well, the earlier discussion I had with Dr. Losos concerned the article and the appearances that it gave of intemperate or whatever type of remark, the -- I was not asked to resign from the Non-Smokers Rights Association, but I knew that it would probably be well

10   received if I did.

Q-   He didn't ask you to resign from the N.S.R.A.?

A-   No.

Q-   But you realized that you were being queried on an appearance of over-activism?

15 A-   Yes.

Q-   Is that correct?

A-   Yes.

Q-   And that because of that, you thought you could appear better to Dr. Losos by resigning?

20 A-   Well, appear better as a member of the department to the public.

Q-   Thank you, Dr. Wigle.

RE-EXAMINATION BY Me PAUL EVRAIRE,

On behalf of Respondent:

Q-   Dr. Wigle, let's look at RJR-150 for a moment and let's

      refer to the paragraph at page one five three eight

5   (1538) that my friend -- have you got that before you?

THE COURT:

      RJ-150?

Me EVRAIRE:

Q-   Let's look at the paragraph that...

10   THE COURT:

      RJ-150?

A-   Yes.

Me EVRAIRE:

      150, yes, that my friend has put before you. The

15   paragraph commencing with "Apologists for the tobacco

      industry". It starts off:

          "Apologists for the tobacco industry ..."

      -- the second full paragraph on the right-hand side of

      that page --

20   "... argue that advertising and promotion

          introduce new brands and influence brand

          selection but do not recruit new smokers."

Q-   Sir, is that supposed to be your opinion?

A-   This is the rationale that...

25   Q-   Is this supposed to be your opinion? We will go faster

                    if you just answer the questions, as my friends have

                    encouraged you to do.

30/0040   A-   That's my opinion as to the rationale offered by the

                    industry, yes.

      5   Q-   Okay, but is it an opinion that you hold about why the

                    tobacco industry introduces new brands?

           A-   No, I do not agree...

           Me POTTER:

                    Objection, My Lord. This man has no expertise, no

     10   background, no basis, no intelligence, no training, no

                    nothing on which to offer...

           THE COURT:

                    He's intelligent, no doubt.

           Me POTTER:

     15   He's very intelligent, but none on which to offer an

                    expert opinion on the reason for which the tobacco

                    industry does anything at all.

           THE COURT:

                    Be that as it may, I read as well as he can do and when

     20   he says after that:

                         "To believe this, one has to accept that ..."

                    -- tatati, tatata.

                         So obviously his opinion is that he doesn't believe

                    that. It's in the paper and I can read as well as Mr.

     25   Evraire and anybody else.

Me EVRAIRE:

All right. Okay. Thank you, my point is made. Thank
you.

Q- Doctor, if we look at your paper on socioeconomic

5   disparities in risk factor for cardiovascular disease, I
won't take you to the conclusions but ask you what is,
from a public health point of view, the purpose of
writing such a paper?

A- The purpose is to identify subgroups of the population

10   where there is still a large problem. Primarily, in
this paper, the risk factors for cardiovascular disease,
if we have succeeded in reducing smoking levels and
cholesterol levels and high blood pressure levels in
some groups, there are other groups in which we have not

15   succeeded, so that the main point is to target such
groups for more effective intervention studies or
programs.

Q- Thank you.

Me EVRAIRE:

20   My Lord, you asked if we would maybe file -- and I think
it might be an appropriate time to file -- the nineteen
eighty-six (1986) excerpt from the "Causes of Death"...

THE COURT:

No, I don't want the excerpts, I want the whole thing.

25

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Me EVRAIRE:

       Okay. Well, we have ordered that. It will take till

       Monday. We will make it available.

THE COURT:

5   Okay, there's no rush.

Me EVRAIRE:

       Okay.

THE COURT:

       I was just wondering.

10 Me EVRAIRE:

       No, I wanted to make sure that you knew it was coming.

       Now...

THE COURT:

       I'm not asking, I'm just suggesting.

15 Me EVRAIRE:

       No, I understand you're not asking and the record will

       show that we are offering it of our own volition.

THE COURT:

       Okay.

20 Me EVRAIRE:

Q-   Doctor, I'm putting before you -- My Lord, I'm looking

       at Volume XXVII of the transcript, this is Dr. Doll's

       testimony -- and Dr. Wigle, have you turned to page four

       two five five (4255)? Just by way of introduction, my

25   friend, Mr. Cherniak, put to you certain statements that

had been made by Dr. Doll and asked you if you agreed

with them. Let me put the actual transcript before you

and ask if you agree with the statements in that. And

I'm reading from line ten (10) of page four two five

5   five (4255) of Volume XXVII. My Lord, if I may follow

with my extract with the witness, I'll have this one

available if Your Lordship wishes to follow.

THE COURT:

    Do you have one?

10   Me EVRAIRE:

    Yes, I'll give you that one.

THE COURT:

    All right.

Me EVRAIRE:

15   Q- Can you follow with me here? So I'll leave it there so

I can read it too. At line ten (10), the question by

Mr. Cherniak was as follows:

    "Yes, well as you've indicated, the question

    of diet is the greatest single factor for

20   cardiovascular disease?

    A: I don't question that.

    Q: You don't question that and am I correct

    that...

    A: That wouldn't be true, of course, under the

25   age of forty-five (45), as you appreciate that

we were talking about all ages. Yes.

Q: I will come to that. The fact is that

cardiovascular disease is usually the

combination of a number of factors.

5   A: Yes."

Do you agree with that statement, Dr. Wigle?

A-   Yes.

Q-   Right.

"Q: Diet is one of them?

10   A: Blood pressure is another, smoking is

another."

Do you agree with that answer by Dr. Doll?

A-   Yes.

Q-   All right.

15   "Q: I'm sorry?

A: Blood pressure.

Q: Yes.

A: Smoking are the ones.

Q: Yes, obesity, overweight is another.

20   A: I'm not an expert on this. I'm not sure

that once you've taken account of hypertension

and blood cholesterol, I don't know that

obesity then has an effect. There's been a

difference of opinion about that."

25   Q: Yes, well, certainly many competent

doctors think that obesity is a contributing

factor to cardiovascular disease, coronary

heart disease?

A: Not independent of hypertension and blood

5   cholesterol level to my knowledge, but I may

be wrong on this."

Do you agree with his answer there, that it is not

independent of hypertension and blood cholesterol -- or

do you know?

10   A-   I agree partially. I agree that it's not independent.

That the effect of obesity is not independent of

hypertension...

Me CHERNIAK:

My Lord...

15   Me EVRAIRE:

Finish your answer.

A-   ....but instead of saying hypertension and blood

cholesterol, I'd say hypertension and diabetes.

Me CHERNIAK:

20   My cross-examination with respect to Dr. Doll's evidence

related to what Dr. Doll said about the relationship

between cardiovascular disease and diet. And on page

forty-two fifty-four (4254) and forty-two fifty-five

(4255), Dr. Doll referred to diet as being the greatest

25   single factor with respect to cardiovascular disease,

and has read the witness what Dr. Doll actually said

from forty-two fifty-five (4255). Dr. Doll said the

same thing on page forty-two fifty-four (4254) at --

between lines twelve (12) and twenty (20).

5   And my friend is now going on to read what Dr. Doll

said on other points that I did not put to the witness.

I didn't put to the witness what Dr. Doll said about

obesity or about cholesterol or things of that nature.

And my submission is that I didn't cross-examine the

10   witness on what Dr. Doll said about those points. It's

not proper to re-examine him on them.

Me EVRAIRE:

Well, it's my submission in response to that: the

purpose of re-examination is to bring out things that

15   ought to have been brought out more fully by my friend.

I do note that yesterday, even though I invited him to

do so, my friend didn't put the transcript to the

witness in this area and, in fact, what, it's my

submission, this is doing, is showing that there was

20   more than just diet that Dr. Doll was concerned about.

That there were other factors. A point not brought out

by my friend.

In any event, we've crossed the bridge that I

wanted to cross with this and I've put the questions

25   that I wanted him to agree with.

THE COURT:

    I figured you were finished. So under reserve, now that he's answered the question.

Me CHERNIAK:

5   At least I got him to stop reading, My Lord.

Me EVRAIRE:

    A bit late.

Q-   All right. Perhaps the last area I'd like to refer to is RJR-159, the published article. You have that before

10   you, Dr. Wigle.

A-   Yes.

Q-   And let me ask you right up front, we have marked for identification as RJR-C and D, papers by Messrs. Collishaw and Tostowaryk which my friend has suggested

15   were drafts of the paper as eventually published. Let me ask you point blank, Doctor, did you, in your work, in preparing for RJR-159, use these as drafts, sir?

A-   The main contribution I made to this paper was method one (1), which I developed independently. Before this

20   paper was written in its final form, I know I saw a draft paper by Collishaw and Tostowaryk, but I'm not sure that it's one of those two (2).

Q-   All right. Thank you.

THE COURT:

25   Could it be either one or none?

A-   I know I saw a draft report, but I'm not sure that it's
     either one of those.

Me EVRAIRE:

Q-   It could have been yet another?

5   A-   I don't know how many there were in that series. There
     could have been several.

Q-   You can't assist the Court with an understanding of what
     you might have looked at, is that what your evidence is?

A-   Presumably it was something closer in time to the later

10   report, because they had advanced their work before I
     got involved.

Q-   All right. And my friend also took you through some
     exhibits this morning -- and let me find the right one
     here. RJR-163. I put that before you as a letter from

15   Dr. Last, identified as scientific editor of the
     Canadian Journal of Public Health to Neil Collishaw.
     You had seen that before today, obviously?

     And what my friend didn't put before you, and I
     would ask if you have a recollection of this, is whether

20   Mr. Collishaw or yourself responded to this letter with
     a subsequent letter to Dr. Last?

A-   I'm sure he did, because if he revised a paper for
     resubmission, you have to explain why you did it -- did
     not do all the revisions that the referees request.

25   Q-   All right. I'll show you now a letter of July sixth

(6th), nineteen eighty-seven (1987) with attachment and
ask if you can identify that?

Don't go through it, but first of all, satisfy
yourself that that is the response to Dr. Last.

5   A-   This -- I'm sure I saw this, but I can't actually say
that I remember seeing it.

Q-   All right. Are you the D.T. Wigle at the bottom of page
...

A-   Yes.

10   Q-   That's referred to there?

A-   Yes.

Q-   And could you look at the appendix to see if that
refreshes your memory?

A-   I've looked through it quickly. It looks familiar, but

15   -- and undoubtedly this is what we sent in.

THE COURT:

When you say "we" -- that's Mr. Collishaw?

A-   The three (3) authors, Collishaw...

Q-   The three (3) authors.

20   A-   ...Tostowaryk, Wigle. I'm sure I saw this before it
went in, but...

Me POTTER:

Q-   But you don't remember, eh?

A-   I literally don't remember.

25

Me EVRAIRE:

Q-   Well...

A-   A failing memory.

Q-   Well, take your time, Dr. Wigle. I think it's important

5   that the Court has your evidence on this.

A-   Take my time and...

Q-   To read it over...

A-   Okay.

Q-   ... and see if that helps to refresh your memory. We

10   can't put it in unless you can recall it.

A-   Well, it looks reasonable, but I literally cannot

         remember.

Q-   All right.   We'll -- could we mark it for

         identification, My Lord. I'll undertake to prove that

15   through a further witness.

THE COURT:

         Do we need to mark it for identification rather than...

Me CHERNIAK:

         No, I can -- as a matter of fact, I...

20 THE COURT:

         Because Mr. Collishaw will test...

Me CHERNIAK:

         ... I'd like Your Lordship to read these responses.

         They're pretty funny.

25

Me EVRAIRE:

    Well...

Me CHERNIAK:

    The one at page four (4) particularly.

5   Me EVRAIRE:

    Well, I'm so much shocked at my friend's language.

    That's editorializing, it's totally unnecessary on the

    record.

Me CHERNIAK:

10   Well, read page four (4).

Me EVRAIRE:

    Well, I fail to see the humour. So I'll mark it, then,

    as AG number... vous êtes perdu, là?

LE GREFFIER:

15   Non, c'est pas ça. C'est parce que ça serait rendu à

    "E".

THE COURT:

    Non non, on le marque carrément.

Me EVRAIRE:

20   AG, oui.

LE GREFFIER:

    186.

Me EVRAIRE:

    186, très bien.

25

32/0065 | THE COURT:

Je vais juste marquer une note pour quand monsieur

Collishaw témoignera, on lui fera identifier.

Me EVRAIRE:

5   C'est ça.

Q-   Dr. Wigle, you took cognizance of the comments by the

Canadian Medical Journal Association's reviewer about

the paper that was put in as RJR-162? You took

cognizance of those comments?

10   A-   That's 159.

Q-   No, 162, the C.M.A.J. You took cognizance of the

comments that were attached by the reviewer to that

letter?

A-   Yes, these are the comments...

15   Q-   Thank you.

A-   ... that we reviewed earlier.

Q-   And you also took cognizance of the comments by

reviewers "A" and "B", associated with the Canadian

Journal of Public Health which my friend put in this

20   morning as well?

A-   Yes.

Q-   All right. And was the article that you had prepared

prior to taking cognizance of those comments printed in

substantially the same form in RJR-159?

25   A-   Yes, the major revision that I recall is the addition of

the confidence limits.

Q- Doctor, why is that the only substantive change that you
made to the article before its publication?

A- The only other substantive change...

5 Q- I said: why is that the only substantive change that you
made?

A- Well, there's two (2) reasons.

Q- Okay.

A- One is that we were asked -- one of the main substantive
10 revisions requested was -- or not revisions, but one of
the main criticisms was the fact that we were using the
Godley data from the sixties (60s) for an estimate in
Canada in the eighties (80s), and at the time that we
did this report, those were the best data available, in
15 our opinion.

Q- M'hm.

A- The other major criticism was the failure to adjust for
confounding factors as alleged by two (2) of the
reviewers, but in fact in method one (1), we did adjust
20 the -- in the Nutrition Canada study, the relative risk
of smoking for confounders. So, in fact, the criticism
by the referee would seem to reflect the failure to
appreciate what we did in method one (1).

Q- And why did you make no other changes?

25 A- Well, apart from correcting typographical errors, there

were no other changes that were necessary.

Q-   Thank you. Those are my questions.

THE COURT:

Monsieur le greffier, l'avez-vous noté, ça?

5 LE GREFFIER:

Non, pas encore.

THE COURT:

So tomorrow is Dr. ...

Me EVRAIRE:

10   Kozlowski first, and then Dr. Ferrence.

THE COURT:

Ah, Kozlowski first?

Me EVRAIRE:

Just to complete the cross-examination and then Dr.

15   Ferrence.

THE COURT:

And that's Mr. Irving or yourself that's doing...

Me CHERNIAK:

No, it'll be Mr. Irving continuing.

20 Me EVRAIRE:

Just to assist Your Lordship, Mr. Irving has told me

that he will be about half a day with Dr. Kozlowski and

about an hour with Dr. Ferrence, just to give you a

sense of time.

25

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Me CHERNIAK:

    Yes, it'll be Mr. Irving. I may well be here for part

    of the day, but Mr. Irving will be conducting the

    cross-examination.

5 THE COURT:

    Oh, I don't mind you being here, that's not the point.

    Because I wanted to know how much time we needed to

    finish Mr. Kozlowski.

Me CHERNIAK:

10   Oh, I see. I'm not sure...

THE COURT:

    I have to tell you everything.

Me CHERNIAK:

    Yes.

15 THE COURT:

    Okay, thank you, Doctor. We can free the witness?

Me EVRAIRE:

    Yes.

THE COURT:

20   You're free. Tomorrow at ten (10:00).

    ADJOURNMENT